

Figure 1. The effect of the concentration of the monomer on the polymerization of  $\alpha$ -methylstyrene initiated by  $\text{TiCl}_4$  in  $\text{CH}_2\text{Cl}_2$  at  $-78^\circ\text{C}$ . The polymerization was carried out in the presence of 0.01 mole of  $\text{TiCl}_4$  and 0.01 mole of  $\text{CH}_2\text{Cl}_2$  in 10 ml of  $\text{CH}_2\text{Cl}_2$ . The concentration of the monomer was varied from 0.01 to 0.1 mole/l. The polymerization was carried out for 10 min. The polymerization was carried out in the presence of 0.01 mole of  $\text{TiCl}_4$  and 0.01 mole of  $\text{CH}_2\text{Cl}_2$  in 10 ml of  $\text{CH}_2\text{Cl}_2$ . The concentration of the monomer was varied from 0.01 to 0.1 mole/l. The polymerization was carried out for 10 min.

FIG. 1B

ggg tca gct ggt tct ctg gag ctg gtt tcg gag gcc ctc tgc agt acc	672
Gly Ser Ala Gly Ser Leu Glu Leu Val Ser Glu Ala Leu Cys Ser Thr	
210 215 220	
aag gga ccc agc agt cca ggg ggc ctg tcc ctc aat tgg tac gaa gcc	720
Lys Gly Pro Ser Ser Pro Gly Gly Leu Ser Leu Asn Trp Tyr Glu Ala	
225 230 235 240	
aac cag ctt aat gag ttc atg ggg cca gag gtg gcc cct gcc ctg cct	768
Asn Gln Leu Asn Glu Phe Met Gly Pro Glu Val Ala Pro Ala Leu Pro	
245 250 255	
gac aac agt ctc agc cct gcc tgc tct gag ttt gtg ggg aca ctg gat	816
Asp Asn Ser Leu Ser Pro Ala Cys Ser Glu Phe Val Gly Thr Leu Asp	
260 265 270	
gac cac cct gtg tct cgg ctg ctc tgg agg cgc ctg aag cca ttg atc	864
Asp His Pro Val Ser Arg Leu Leu Trp Arg Arg Leu Lys Pro Leu Ile	
275 280 285	
ctc ggg aaa att ctc ttt gca cct gac aca aac ttc act cgg aag ctc	912
Leu Gly Lys Ile Leu Phe Ala Pro Asp Thr Asn Phe Thr Arg Lys Leu	
290 295 300	
atg gct cag gtg aac cag acc ttc gag gag ctg gct ctg ttg agg gac	960
Met Ala Gln Val Asn Gln Thr Phe Glu Glu Leu Ala Leu Leu Arg Asp	
305 310 315 320	
cta cac gaa ctc tgg ggg gtg ctg gga ccc cag atc ttc aac ttc atg	1008
Leu His Glu Leu Trp Gly Val Leu Gly Pro Gln Ile Phe Asn Phe Met	
325 330 335	
aat gac agt acc aac gtg gcc atg ctt cag agg ctt ctg gat gtg ggg	1056
Asn Asp Ser Thr Asn Val Ala Met Leu Gln Arg Leu Leu Asp Val Gly	
340 345 350	
ggc aca ggg cag agg cag cag aca ccc aga gcc cag aag aag ttg gag	1104
Gly Thr Gly Gln Arg Gln Gln Thr Pro Arg Ala Gln Lys Lys Leu Glu	
355 360 365	
gct atc aaa gac ttt ctg gat cct agt agg ggt ggc tac agc tgg cgg	1152
Ala Ile Lys Asp Phe Leu Asp Pro Ser Arg Gly Gly Tyr Ser Trp Arg	
370 375 380	
gag gcc cac gca gat atg gga cgc ctg gct gga atc cta gga caa atg	1200
Glu Ala His Ala Asp Met Gly Arg Leu Ala Gly Ile Leu Gly Gln Met	
385 390 395 400	
atg gag tgt gtg tcc ctg gac aag ctg gag gct gtg ccc tca gag gaa	1248
Met Glu Cys Val Ser Leu Asp Lys Leu Glu Ala Val Pro Ser Glu Glu	
405 410 415	

# FIG. 1C

gct ctt gtg tcc cgt gcc ctg gag ctg ctg ggt gag cgc cgc ctc tgg	1296
Ala Leu Val Ser Arg Ala Leu Glu Leu Leu Gly Glu Arg Arg Leu Trp	
420 425 430	
gca ggc atc gtg ttc ctg agc cca gag cat cct ctg gac cca tcc gaa	1344
Ala Gly Ile Val Phe Leu Ser Pro Glu His Pro Leu Asp Pro Ser Glu	
435 440 445	
ctg tca tct cca gcc ctg agt cct ggc cac cta cga ttc aag att cga	1392
Leu Ser Ser Pro Ala Leu Ser Pro Gly His Leu Arg Phe Lys Ile Arg	
450 455 460	
atg gat atc gat gat gtc aca agg acc aat aag atc agg gac aag ttt	1440
Met Asp Ile Asp Asp Val Thr Arg Thr Asn Lys Ile Arg Asp Lys Phe	
465 470 475 480	
tgg gac cca ggt ccg tca gca gat cct ttc atg gac ctt cgg tat gtg	1488
Trp Asp Pro Gly Pro Ser Ala Asp Pro Phe Met Asp Leu Arg Tyr Val	
485 490 495	
tgg gga ggc ttc gtg tac ctg cag gac ctg ctg gag cag gca gct gtg	1536
Trp Gly Gly Phe Val Tyr Leu Gln Asp Leu Leu Glu Gln Ala Ala Val	
500 505 510	
cga gtg ctc ggt ggc ggg aac tcc cgc aca ggt ctc tac ctg cag cag	1584
Arg Val Leu Gly Gly Gly Asn Ser Arg Thr Gly Leu Tyr Leu Gln Gln	
515 520 525	
atg cca cac ccc tgc tac gtg gat gat gtg ttc ctg cgg gtg ctg agc	1632
Met Pro His Pro Cys Tyr Val Asp Asp Val Phe Leu Arg Val Leu Ser	
530 535 540	
cgg tct ctg cct ctg ttt ctg act ctg gcc tgg att tat tcg gtg gcg	1680
Arg Ser Leu Pro Leu Phe Leu Thr Leu Ala Trp Ile Tyr Ser Val Ala	
545 550 555 560	
ctc act gtg aag gcc gtg gtg cgt gag aaa gag aca cgg ctg cga gaa	1728
Leu Thr Val Lys Ala Val Val Arg Glu Lys Glu Thr Arg Leu Arg Glu	
565 570 575	
acc atg cgt gcg atg ggg ctg agc cgc gcg gtg ctc tgg ctt ggt tgg	1776
Thr Met Arg Ala Met Gly Leu Ser Arg Ala Val Leu Trp Leu Gly Trp	
580 585 590	
ttc ctc agc tgc ctg gga ccc ttc ctg gtc agc gct gcg ttg ctg gta	1824
Phe Leu Ser Cys Leu Gly Pro Phe Leu Val Ser Ala Ala Leu Leu Val	
595 600 605	
tta gtg ctt aag cta ggg aac atc ctt cct tac agc cac ccg gtt gta	1872
Leu Val Leu Lys Leu Gly Asn Ile Leu Pro Tyr Ser His Pro Val Val	
610 615 620	

# FIG. 1D

atc ttc ctt ttc ttg gcg gcc ttc gcg gtg gcc acc gtc gct cag agt	1920
Ile Phe Leu Phe Leu Ala Ala Phe Ala Val Ala Thr Val Ala Ala Gln Ser	
625 630 635 640	
ttt ctg ctc agc gcc ttc ttc tcc agg gcc aat ctg gca gca gcc tgc	1968
Phe Leu Leu Ser Ala Phe Phe Ser Arg Ala Asn Leu Ala Ala Ala Cys	
645 650 655	
ggg ggg ctc gcc tat ttt gcg ctc tat ctg ccc tac gta ctg tgt gtg	2016
Gly Gly Leu Ala Tyr Phe Ala Leu Tyr Leu Pro Tyr Val Leu Cys Val	
660 665 670	
gcc tgg cgc gag cgc ctg cac ctg ggc gga ctc tta gct gcg agc ctg	2064
Ala Trp Arg Glu Arg Leu His Leu Gly Gly Leu Leu Ala Ala Ser Leu	
675 680 685	
ctg tcc cct gta gcc ttt ggc ttt gga tgc gaa agc ctg gcg cta cta	2112
Leu Ser Pro Val Ala Phe Gly Phe Gly Cys Glu Ser Leu Ala Leu Leu	
690 695 700	
gag gag cag gga gac ggg gct cag tgg cac aat ttg ggc aca ggc ccc	2160
Glu Glu Gln Gly Asp Gly Ala Gln Trp His Asn Leu Gly Thr Gly Pro	
705 710 715 720	
gcg gag gac gtc ttc agc ctg gcc cag gtg tct gcc ttc ctg ttg ctt	2208
Ala Glu Asp Val Phe Ser Leu Ala Gln Val Ser Ala Phe Leu Leu Leu	
725 730 735	
gat gcc gtc atc tac ggc ctt gcc ctc tgg tac cta gag gct gtg tgc	2256
Asp Ala Val Ile Tyr Gly Leu Ala Leu Trp Tyr Leu Glu Ala Val Cys	
740 745 750	
cca ggc cag tat gga atc cct gaa cca tgg aat ttc cct ttt cgg agg	2304
Pro Gly Gln Tyr Gly Ile Pro Glu Pro Trp Asn Phe Pro Phe Arg Arg	
755 760 765	
agc tac tgg tgt gga cct ggg cct ccc aag agt tct gtc ttg gcc cct	2352
Ser Tyr Trp Cys Gly Pro Gly Pro Pro Lys Ser Ser Val Leu Ala Pro	
770 775 780	
gcc cca caa gat ccc aag gtt ctg gtg gaa gag cca ccc ctt ggc ctg	2400
Ala Pro Gln Asp Pro Lys Val Leu Val Glu Glu Pro Pro Leu Gly Leu	
785 790 795 800	
gtt cct ggt gtc tcc att cga ggc ctg aag aaa cat ttt cgt ggc tgt	2448
Val Pro Gly Val Ser Ile Arg Gly Leu Lys Lys His Phe Arg Gly Cys	
805 810 815	
ccg cag cca gcc ctg caa gga ctc aac ctt gac ttc tac gaa ggc cac	2496
Pro Gln Pro Ala Leu Gln Gly Leu Asn Leu Asp Phe Tyr Glu Gly His	
820 825 830	

# FIG. 1E

atc act gcc ttt ttg ggt cac aac ggg gct ggc aag aca acc aca ctg	2544
Ile Thr Ala Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Leu	
835 840 845	
tcc att ttg agt ggt ctc ttc cca ccc agt agt ggc tcg gcc tcc atc	2592
Ser Ile Leu Ser Gly Leu Phe Pro Pro Ser Ser Gly Ser Ala Ser Ile	
850 855 860	
ctg ggc cat gat gta caa acc aac atg gca gcc atc cgg ccc cac ctg	2640
Leu Gly His Asp Val Gln Thr Asn Met Ala Ala Ile Arg Pro His Leu	
865 870 875 880	
ggc atc tgc ccg cag tac aat gtg ctg ttt gat atg ctg aca gtg gaa	2688
Gly Ile Cys Pro Gln Tyr Asn Val Leu Phe Asp Met Leu Thr Val Glu	
885 890 895	
gaa cat gtt tgg ttc tat ggc cgt ttg aaa ggc gtg agt gca gcc gcc	2736
Glu His Val Trp Phe Tyr Gly Arg Leu Lys Gly Val Ser Ala Ala Ala	
900 905 910	
atg ggc ccc gag cgg gaa cgt ctg ata cgg gat gtg ggg ctt acc ctc	2784
Met Gly Pro Glu Arg Glu Arg Leu Ile Arg Asp Val Gly Leu Thr Leu	
915 920 925	
aag cgg gac aca cag aca cgc cac ctc tct ggt gga atg cag aga aaa	2832
Lys Arg Asp Thr Gln Thr Arg His Leu Ser Gly Gly Met Gln Arg Lys	
930 935 940	
ctt tct gtg gcc att gcc ttt gtg ggt ggc tct cgt gtg gtc atc atg	2880
Leu Ser Val Ala Ile Ala Phe Val Gly Gly Ser Arg Val Val Ile Met	
945 950 955 960	
gac gag ccc act gct ggt gtg gac ccc gct tcc cgc cgt ggc att tgg	2928
Asp Glu Pro Thr Ala Gly Val Asp Pro Ala Ser Arg Arg Gly Ile Trp	
965 970 975	
gaa ttg cta ctt aag tac aga gaa ggt cgg aca ctg att ctc tcc act	2976
Glu Leu Leu Leu Lys Tyr Arg Glu Gly Arg Thr Leu Ile Leu Ser Thr	
980 985 990	
cac cac ctg gat gag gca gag ctc ttg gga gat cgc gtg gcc atg gtg	3024
His His Leu Asp Glu Ala Glu Leu Leu Gly Asp Arg Val Ala Met Val	
995 1000 1005	
gca ggt ggc tct ttg tgc tgc tgt ggg tcc ccg ctt ttc ttg cgc cga	3072
Ala Gly Gly Ser Leu Cys Cys Cys Gly Ser Pro Leu Phe Leu Arg Arg	
1010 1015 1020	
cac ttg ggc tgc ggt tac tac ctg acc ctg gtg aag agt tct cag tcc	3120
His Leu Gly Cys Gly Tyr Tyr Leu Thr Leu Val Lys Ser Ser Gln Ser	
1025 1030 1035 1040	

[illegible]

ctc	gtc	acc	cat	gat	gct	aag	gga	gac	agt	gag	gac	ccc	aga	cgg	gaa	3168
Leu	Val	Thr	His	Asp	Ala	Lys	Gly	Asp	Ser	Glu	Asp	Pro	Arg	Arg	Glu	
			1045					1050					1055			
aag	aag	tca	gat	ggc	aat	ggc	agg	acg	tca	gac	aca	gcg	ttc	aca	cga	3216
Lys	Lys	Ser	Asp	Gly	Asn	Gly	Arg	Thr	Ser	Asp	Thr	Ala	Phe	Thr	Arg	
			1060					1065					1070			
gga	acc	tca	gac	aag	agc	aac	cag	gcc	ccg	gct	cct	ggc	gcc	gtt	ccc	3264
Gly	Thr	Ser	Asp	Lys	Ser	Asn	Gln	Ala	Pro	Ala	Pro	Gly	Ala	Val	Pro	
			1075				1080					1085				
atc	acc	cca	agc	aca	gcc	cgg	ata	cta	gag	cta	gtg	cag	cag	cat	gtg	3312
Ile	Thr	Pro	Ser	Thr	Ala	Arg	Ile	Leu	Glu	Leu	Val	Gln	Gln	His	Val	
			1090			1095					1100					
cct	gga	gca	caa	ctc	gtg	gag	gac	ctg	ccc	cat	gag	ctt	ctg	ctt	gtg	3360
Pro	Gly	Ala	Gln	Leu	Val	Glu	Asp	Leu	Pro	His	Glu	Leu	Leu	Leu	Val	
1105				1110					1115					1120		
cta	ccc	tat	gcg	ggg	gcc	ctg	gat	ggc	agc	ttc	gcc	atg	gtc	ttc	cag	3408
Leu	Pro	Tyr	Ala	Gly	Ala	Leu	Asp	Gly	Ser	Phe	Ala	Met	Val	Phe	Gln	
			1125					1130					1135			
gag	ctg	gat	cag	cag	ctg	gag	ctc	ctg	ggg	ctc	aca	ggc	tac	ggg	atc	3456
Glu	Leu	Asp	Gln	Gln	Leu	Glu	Leu	Leu	Gly	Leu	Thr	Gly	Tyr	Gly	Ile	
			1140				1145					1150				
tcg	gac	acc	aac	ctg	gag	gag	atc	ttc	cta	aag	gtg	gtg	gag	gat	gcg	3504
Ser	Asp	Thr	Asn	Leu	Glu	Glu	Ile	Phe	Leu	Lys	Val	Val	Glu	Asp	Ala	
			1155			1160					1165					
cac	aga	gaa	ggg	ggg	gac	tct	aga	ccg	cag	ctg	cac	ctt	cgc	aca	tgc	3552
His	Arg	Glu	Gly	Gly	Asp	Ser	Arg	Pro	Gln	Leu	His	Leu	Arg	Thr	Cys	
	1170				1175			1180								
act	cca	cag	ccc	ccc	aca	ggg	cca	gag	gca	tca	gtt	ctg	gag	aat	ggg	3600
Thr	Pro	Gln	Pro	Pro	Thr	Gly	Pro	Glu	Ala	Ser	Val	Leu	Glu	Asn	Gly	
1185				1190				1195						1200		
gag	ctg	gct	aag	ctg	gtg	ctg	gat	ccc	caa	gcc	cca	cag	ggc	ttg	gca	3648
Glu	Leu	Ala	Lys	Leu	Val	Leu	Asp	Pro	Gln	Ala	Pro	Gln	Gly	Leu	Ala	
			1205					1210					1215			
ccc	aac	gct	gcc	caa	gtg	caa	ggc	tgg	aca	ctt	acc	tgt	caa	cag	ctc	3696
Pro	Asn	Ala	Ala	Gln	Val	Gln	Gly	Trp	Thr	Leu	Thr	Cys	Gln	Gln	Leu	
			1220				1225					1230				
cgg	gct	ctg	ctc	cac	aag	cgt	ttt	ctg	ctt	gct	cgc	cgc	agc	cgc	cgg	3744
Arg	Ala	Leu	Leu	His	Lys	Arg	Phe	Leu</								

# FIG. 1G

ggc ctg ttt gca cag gtt gtg ttg cct gcc ctc ttt gtg ggc ctg gcc	3792
Gly Leu Phe Ala Gln Val Val Leu Pro Ala Leu Phe Val Gly Leu Ala	
1250 1255 1260	
ctg ttc ttc agc ctc att gtg cct cct ttt ggc cag tac cca ccc ctg	3840
Leu Phe Phe Ser Leu Ile Val Pro Pro Phe Gly Gln Tyr Pro Pro Leu	
1265 1270 1275 1280	
cag ctc agc cct gct atg tat ggc cct cag gtc tcg ttc ttc agt gag	3888
Gln Leu Ser Pro Ala Met Tyr Gly Pro Gln Val Ser Phe Phe Ser Glu	
1285 1290 1295	
gat gcc cct ggg gac ccc aac cgg atg aag ctg ctg gag gct ctg cta	3936
Asp Ala Pro Gly Asp Pro Asn Arg Met Lys Leu Leu Glu Ala Leu Leu	
1300 1305 1310	
ggg gag gct ggg ctg cag gaa ccc agt atg cag gac aaa gat gcc agg	3984
Gly Glu Ala Gly Leu Gln Glu Pro Ser Met Gln Asp Lys Asp Ala Arg	
1315 1320 1325	
gga tct gag tgt aca cac tcc cta gct tgc tac ttc acg gtc cct gag	4032
Gly Ser Glu Cys Thr His Ser Leu Ala Cys Tyr Phe Thr Val Pro Glu	
1330 1335 1340	
gtc cct cct gat gtg gcc agc atc ctg gcc agt ggc aac tgg acg cca	4080
Val Pro Pro Asp Val Ala Ser Ile Leu Ala Ser Gly Asn Trp Thr Pro	
1345 1350 1355 1360	
gaa tct cca tcc cca gct tgc caa tgc agt cag cct gga gcc cgc cgc	4128
Glu Ser Pro Ser Pro Ala Cys Gln Cys Ser Gln Pro Gly Ala Arg Arg	
1365 1370 1375	
ctg ttg cca gat tgc ccg gct gga gct ggg ggt cca cca ccc ccc cag	4176
Leu Leu Pro Asp Cys Pro Ala Gly Ala Gly Gly Pro Pro Pro Gln	
1380 1385 1390	
gct gtg gct ggc ttg ggg gag gtg gtc cag aac ctc act ggc cga aat	4224
Ala Val Ala Gly Leu Gly Glu Val Val Gln Asn Leu Thr Gly Arg Asn	
1395 1400 1405	
gtg tct gac ttt ttg gtg aag aca tac ccc agc ctg gtg cgc cga ggc	4272
Val Ser Asp Phe Leu Val Lys Thr Tyr Pro Ser Leu Val Arg Arg Gly	
1410 1415 1420	
cta aag acc aag aag tgg gtg gat gag gtc aga tat ggg ggc ttc tcc	4320
Leu Lys Thr Lys Lys Trp Val Asp Glu Val Arg Tyr Gly Gly Phe Ser	
1425 1430 1435 1440	
ctg gga ggc cga gat cca gac ctg ccc aca ggg cat gag gtg gtc cgc	4368
Leu Gly Gly Arg Asp Pro Asp Leu Pro Thr Gly His Glu Val Val Arg	
1445 1450 1455	

# FIG. 1H

aca ttg gca gag att cgg gca ctg ctg agc ccc caa cct ggg aat gcg	4416
Thr Leu Ala Glu Ile Arg Ala Leu Leu Ser Pro Gln Pro Gly Asn Ala	
1460 1465 1470	
cta gac cgt atc ctg aac aac ctc act cag tgg gcc ctt ggc ctt gat	4464
Leu Asp Arg Ile Leu Asn Asn Leu Thr Gln Trp Ala Leu Gly Leu Asp	
1475 1480 1485	
gct cgg aac agc ctc aag atc tgg ttc aac aac aag ggc tgg cat gcc	4512
Ala Arg Asn Ser Leu Lys Ile Trp Phe Asn Asn Lys Gly Trp His Ala	
1490 1495 1500	
atg gtg gcc ttt gtg aac cga gcc aac aat gga ctc cta cat gcc ctc	4560
Met Val Ala Phe Val Asn Arg Ala Asn Asn Gly Leu Leu His Ala Leu	
1505 1510 1515 1520	
cta cca tct ggt cca gtc cgc cat gcc cac agc atc act aca ctc aac	4608
Leu Pro Ser Gly Pro Val Arg His Ala His Ser Ile Thr Thr Leu Asn	
1525 1530 1535	
cat cct ttg aac ttg acc aag gag cag cta tct gaa gct aca ctg ata	4656
His Pro Leu Asn Leu Thr Lys Glu Gln Leu Ser Glu Ala Thr Leu Ile	
1540 1545 1550	
gcc tcc tct gtg gat gtc ctt gtc tcc atc tgt gtg gtc ttc gcc atg	4704
Ala Ser Ser Val Asp Val Leu Val Ser Ile Cys Val Val Phe Ala Met	
1555 1560 1565	
tca ttt gtc cca gcc agc ttt acc ctg gtc ctc ata gag gaa cgc atc	4752
Ser Phe Val Pro Ala Ser Phe Thr Leu Val Leu Ile Glu Glu Arg Ile	
1570 1575 1580	
acc aga gcc aag cat ctg cag ctg gtc agc ggc ctg ccc caa acc ctc	4800
Thr Arg Ala Lys His Leu Gln Leu Val Ser Gly Leu Pro Gln Thr Leu	
1585 1590 1595 1600	
tat tgg ctt ggc aac ttc ctc tgg gac atg tgt aac tac ttg gtg gca	4848
Tyr Trp Leu Gly Asn Phe Leu Trp Asp Met Cys Asn Tyr Leu Val Ala	
1605 1610 1615	
gtg tgc ata gtg gtg ttc atc ttc cta gcc ttt cag cag aga gcc tat	4896
Val Cys Ile Val Val Phe Ile Phe Leu Ala Phe Gln Gln Arg Ala Tyr	
1620 1625 1630	
gtg gcc cca gag aac ctg cct gct ctc tta ctc ttg ctt ctg ctg tat	4944
Val Ala Pro Glu Asn Leu Pro Ala Leu Leu Leu Leu Leu Leu Tyr	
1635 1640 1645	
ggg tgg tct atc aca cca ctc atg tac cca gcc tcc ttc ttc ttc tca	4992
Gly Trp Ser Ile Thr Pro Leu Met Tyr Pro Ala Ser Phe Phe Phe Ser	
1650 1655 1660	



[illegible]

gtg	ccc	agc	acg	gcc	tat	gtg	gtg	ctc	acc	tgc	atc	aac	ctc	ttc	att	5040
Val	Pro	Ser	Thr	Ala	Tyr	Val	Val	Leu	Thr	Cys	Ile	Asn	Leu	Phe	Ile	
1665				1670				1675				1680				
ggc	atc	aat	agc	agc	atg	gcc	acc	ttc	gtg	cta	gaa	ctg	ctt	tca	gat	5088
Gly	Ile	Asn	Ser	Ser	Met	Ala	Thr	Phe	Val	Leu	Glu	Leu	Leu	Ser	Asp	
1685				1690				1695								
cag	aac	ctg	caa	gaa	gtg	agc	cgg	atc	ctg	aaa	caa	gtg	ttt	ctt	att	5136
Gln	Asn	Leu	Gln	Glu	Val	Ser	Arg	Ile	Leu	Lys	Gln	Val	Phe	Leu	Ile	
1700				1705				1710								
ttc	ccc	cac	ttt	tgc	ctt	ggc	cga	ggg	ctc	att	gac	atg	gtt	cgg	aac	5184
Phe	Pro	His	Phe	Cys	Leu	Gly	Arg	Gly	Leu	Ile	Asp	Met	Val	Arg	Asn	
1715				1720				1725								
cag	gcc	atg	gca	gat	gcc	ttt	gag	cgc	tta	gga	gac	aag	caa	ttt	cag	5232
Gln	Ala	Met	Ala	Asp	Ala	Phe	Glu	Arg	Leu	Gly	Asp	Lys	Gln	Phe	Gln	
1730				1735				1740								
tca	ccc	cta	cgc	tgg	gac	atc	att	ggc	aag	aac	ctc	ctg	gcc	atg	atg	5280
Ser	Pro	Leu	Arg	Trp	Asp	Ile	Ile	Gly	Lys	Asn	Leu	Leu	Ala	Met	Met	
1745				1750				1755				1760				
gcc	cag	gga	cct	ctg	ttc	ctc	ctc	atc	aca	ctc	ctg	ctc	caa	cac	cgc	5328
Ala	Gln	Gly	Pro	Leu	Phe	Leu	Leu	Ile	Thr	Leu	Leu	Leu	Gln	His	Arg	
1765				1770				1775								
aac	cgt	ctc	ctg	cca	caa	tca	aaa	cca	aga	ctg	ctg	ccg	ccc	ctg	ggg	5376
Asn	Arg	Leu	Leu	Pro	Gln	Ser	Lys	Pro	Arg	Leu	Leu	Pro	Pro	Leu	Gly	
1780				1785				1790								
gag	gag	gat	gag	gat	gtg	gct	caa	gag	cgt	gag	cgg	gtg	acc	aag	ggg	5424
Glu	Glu	Asp	Glu	Asp	Val	Ala	Gln	Glu	Arg	Glu	Arg	Val	Thr	Lys	Gly	
1795				1800				1805								
gct	acc	cag	ggg	gat	gtg	cta	gtc	ctc	agg	gac	ttg	acc	aag	gtt	tac	5472
Ala	Thr	Gln	Gly	Asp	Val	Leu	Val	Leu	Arg	Asp	Leu	Thr	Lys	Val	Tyr	
1810				1815				1820								
cgt	ggg	cag	agg	aac	cca	gct	gtg	gat	cgc	ctg	tgc	tta	ggg	atc	ccc	5520
Arg	Gly	Gln	Arg	Asn	Pro	Ala	Val	Asp	Arg	Leu	Cys	Leu	Gly	Ile	Pro	
1825				1830				1835				1840				
cct	ggg	gag	tgt	ttc	ggg	ctg	ctg	ggt	gtc	aac	ggg	gca	ggg	aag	aca	5568
Pro	Gly	Glu	Cys	Phe	Gly	Leu	Leu	Gly	Val	Asn	Gly	Ala	Gly	Lys	Thr	
1845				1850				1855								
tcc	acc	ttc	cgc	atg	gtg	aca	ggg	gac	aca	ctg	ccc	agc	agt	ggg	gaa	5616
Ser	Thr	Phe	Arg	Met	Val	Thr	Gly	Asp	Thr	Leu	Pro	Ser	Ser	Gly	Glu	
1860				1865				1870								

FIG. 1J

gca gta ctg gca ggc cac aac gtg gcc cag gag cgg tct gcc gca cac	5664
Ala Val Leu Ala Gly His Asn Val Ala Gln Glu Arg Ser Ala Ala His	
1875 1880 1885	
cgc agc atg ggc tac tgt ccc cag tct gat gcc atc ttc gac ctg ctg	5712
Arg Ser Met Gly Tyr Cys Pro Gln Ser Asp Ala Ile Phe Asp Leu Leu	
1890 1895 1900	
acc ggc cgg gaa cat ctg gaa ctg ttt gct cgc ctg cgc ggg gtg ccc	5760
Thr Gly Arg Glu His Leu Glu Leu Phe Ala Arg Leu Arg Gly Val Pro	
1905 1910 1915 1920	
gag gcc caa gtt gcc cag act gcg ctc tct ggc ctg gtg cgc ctg ggc	5808
Glu Ala Gln Val Ala Gln Thr Ala Leu Ser Gly Leu Val Arg Leu Gly	
1925 1930 1935	
ctt cct agc tat gca gac cga ccc gcg ggt acc tac agc gga ggc aac	5856
Leu Pro Ser Tyr Ala Asp Arg Pro Ala Gly Thr Tyr Ser Gly Gly Asn	
1940 1945 1950	
aaa cgg aag ctg gcg aca gcc tta gct ctg gtt ggt gac cca gct gtg	5904
Lys Arg Lys Leu Ala Thr Ala Leu Ala Leu Val Gly Asp Pro Ala Val	
1955 1960 1965	
gtc ttt ctg gac gag ccc acc aca ggc atg gac cca agt gcg cgg cga	5952
Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Ser Ala Arg Arg	
1970 1975 1980	
ttt ctt tgg aac agc ttg ctg tcc gtg gtg cgc gag ggc cgc tcc gta	6000
Phe Leu Trp Asn Ser Leu Leu Ser Val Val Arg Glu Gly Arg Ser Val	
1985 1990 1995 2000	
gtg ctc acg tcg cac agc atg gag gag tgc gaa gcg ctc tgc acg cgc	6048
Val Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr Arg	
2005 2010 2015	
ctg gcc atc atg gtg aac ggg cgg ttc cgc tgt ctg gga agc tct cag	6096
Leu Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser Ser Gln	
2020 2025 2030	
cat ctc aaa ggc agg ttc ggg gct ggc cac aca ctg act cta agg gtc	6144
His Leu Lys Gly Arg Phe Gly Ala Gly His Thr Leu Thr Leu Arg Val	
2035 2040 2045	
cca ccg gac cag cct gag ccg gcg ata gcc ttc atc agg atc aca ttc	6192
Pro Pro Asp Gln Pro Glu Pro Ala Ile Ala Phe Ile Arg Ile Thr Phe	
2050 2055 2060	
cct ggg gct gaa ctc cgg gag gtg cac ggc agc cgt ctg cgc ttc caa	6240
Pro Gly Ala Glu Leu Arg Glu Val His Gly Ser Arg Leu Arg Phe Gln	
2065 2070 2075 2080	

FIG. 1K

ctg cca ccg ggg ggc aga tgc acc ctg aca cga gtg ttc agg gag ctg	6288
Leu Pro Pro Gly Gly Arg Cys Thr Leu Thr Arg Val Phe Arg Glu Leu	
2085 2090 2095	
gct gcc cag ggc agg gcc cac ggt gtg gag gac ttc tct gtg agc cag	6336
Ala Ala Gln Gly Arg Ala His Gly Val Glu Asp Phe Ser Val Ser Gln	
2100 2105 2110	
acc act ctg gag gag gtg ttc cta tat ttc tcc aaa gac caa ggg gaa	6384
Thr Thr Leu Glu Glu Val Phe Leu Tyr Phe Ser Lys Asp Gln Gly Glu	
2115 2120 2125	
gag gaa gag agc agt cgg cag gag gct gaa gaa gag gag gtt tcc aaa	6432
Glu Glu Glu Ser Ser Arg Gln Glu Ala Glu Glu Glu Glu Val Ser Lys	
2130 2135 2140	
cct ggc cgg cag cat ccc aaa cgt gtc agc cga ttc ctg gaa gac ccc	6480
Pro Gly Arg Gln His Pro Lys Arg Val Ser Arg Phe Leu Glu Asp Pro	
2145 2150 2155 2160	
agc tct gtg gag acc atg atc tga gcatgcctgc cttgggactg agtggcaaag	6534
Ser Ser Val Glu Thr Met Ile	
2165	
ctcagacaga ggatctctgt accatacgtt ggctcccaga aagccttggg ctctggggga	6594
aataaaaaaga aactagaatg agaaaaaaaa aaaaaaaaaa	6633

FIG. 2A

ctcagggcg	gcgcgctccc	tgctgtgc	tgggcggagg	gaagcggca	agagctgcgg	60
agccccctgga	agagcttcca	ggaacctgc	gctgtgggat	aaaggaatga	ggttcagaaa	120
ggggcagggga	gttgcccgca	gccgcaccgc	acgtcttcag	cccgaccgtt	gtcctgacct	180
ctctgtcccg	tccccgcgc	agtctcacc	atg gcc ttc tgg aca cag ctg atg			233
			<u>Met Ala Phe Trp Thr Gln Leu Met</u>			
			1	5		
ctg ctg ctc tgg aag aat ttc atg tat cgc cgg aga cag ccg gtc cag						281
<u>Leu Leu Leu Trp Lys Asn Phe Met Tyr Arg Arg Arg Gln Pro Val Gln</u>						
10	15	20				
ctc ctg gtc gaa ttg ctg tgg cct ctc ttc ctc ttc ttc atc ctg gtg						329
<u>Leu Leu Val Glu Leu Leu Trp Pro Leu Phe Leu Phe Phe Ile Leu Val</u>						
25	30	35	40			
gct gtt cgc cac tcc cac ccg ccc ctg gag cac cat gaa tgc cac ttc						377
<u>Ala Val Arg His Ser His</u>	<u>Pro Pro</u>	<u>Leu Glu His His</u>	<u>Glu Cys His Phe</u>			
45	50	55				
cca aac aag cca ctg cca tgc gcg ggc acc gtg ccc tgg ctc cag ggt						425
<u>Pro Asn Lys Pro Leu Pro Ser Ala Gly Thr Val Pro Trp Leu Gln Gly</u>						
60	65	70				
ctc atc tgt aat gtg aac aac acc tgc ttt ccg cag ctg aca ccg ggc						473
<u>Leu Ile Cys Asn Val Asn Asn Thr Cys Phe Pro Gln Leu Thr Pro Gly</u>						
75	80	85				
gag gag ccc ggg cgc ctg agc aac ttc aac gac tcc ctg gtc tcc ccg						521
<u>Glu Glu Pro Gly Arg Leu Ser Asn Phe Asn Asp Ser Leu Val Ser Arg</u>						
90	95	100				
ctg cta gcc gat gcc cgc act gtg ctg gga ggg gcc agt gcc cac agg						569
<u>Leu Leu Ala Asp Ala Arg Thr Val Leu Gly Gly Ala Ser Ala His Arg</u>						
105	110	115	120			
acg ctg gct ggc cta ggg aag ctg atc gcc acg ctg agg gct gca cgc						617
<u>Thr Leu Ala Gly Leu Gly Lys Leu Ile Ala Thr Leu Arg Ala Ala Arg</u>						
125	130	135				
agc acg gcc cag cct caa cca acc aag cag tct cca ctg gaa cca ccc						665
<u>Ser Thr Ala Gln Pro Gln Pro Thr Lys Gln Ser Pro Leu Glu Pro Pro</u>						
140	145	150				
atg ctg gat gtc gcg gag ctg ctg acg tca ctg ctg cgc acg gaa tcc						713
<u>Met Leu Asp Val Ala Glu Leu Leu Thr Ser Leu Leu Arg Thr Glu Ser</u>						
155	160	165				
ctg ggg ttg gca ctg ggc caa gcc cag gag ccc ttg cac agc ttg ttg						761
<u>Leu Gly Leu Ala Leu Gly Gln Ala Gln Glu Pro Leu His Ser Leu Leu</u>						
170	175	180				

FIG. 2B

gag gcc gct gag gac ctg gcc cag gag ctc ctg gcg ctg cgc agc ctg	809
Glu Ala Ala Glu Asp Leu Ala Gln Glu Leu Leu Ala Leu Arg Ser Leu	
185 190 195 200	
gtg gag ctt cgg gca ctg ctg cag aga ccc cga ggg acc agc ggc ccc	857
Val Glu Leu Arg Ala Leu Leu Gln Arg Pro Arg Gly Thr Ser Gly Pro	
205 210 215	
ctg gag ttg ctg tca gag gcc ctc tgc agt gtc agg gga cct agc agc	905
Leu Glu Leu Leu Ser Glu Ala Leu Cys Ser Val Arg Gly Pro Ser Ser	
220 225 230	
aca gtg ggc ccc tcc ctc aac tgg tac gag gct agt gac ctg atg gag	953
Thr Val Gly Pro Ser Leu Asn Trp Tyr Glu Ala Ser Asp Leu Met Glu	
235 240 245	
ctg gtg ggg cag gag cca gaa tcc gcc ctg cca gac agc agc ctg agc	1001
Leu Val Gly Gln Glu Pro Glu Ser Ala Leu Pro Asp Ser Ser Leu Ser	
250 255 260	
ccc gcc tgc tcg gag ctg att gga gcc ctg gac agc cac ccg ctg tcc	1049
Pro Ala Cys Ser Glu Leu Ile Gly Ala Leu Asp Ser His Pro Leu Ser	
265 270 275 280	
cgc ctg ctc tgg aga cgc ctg aag cct ctg atc ctc ggg aag cta ctc	1097
Arg Leu Leu Trp Arg Arg Leu Lys Pro Leu Ile Leu Gly Lys Leu Leu	
285 290 295	
ttt gca cca gat aca cct ttt acc cgg aag ctc atg gcc cag gtg aac	1145
Phe Ala Pro Asp Thr Pro Phe Thr Arg Lys Leu Met Ala Gln Val Asn	
300 305 310	
cgg acc ttc gag gag ctc acc ctg ctg agg gat gtc cgg gag gtg tgg	1193
Arg Thr Phe Glu Glu Leu Thr Leu Leu Arg Asp Val Arg Glu Val Trp	
315 320 325	
gag atg ctg gga ccc cgg atc ttc acc ttc atg aac gac agt tcc aat	1241
Glu Met Leu Gly Pro Arg Ile Phe Thr Phe Met Asn Asp Ser Ser Asn	
330 335 340	
gtg gcc atg ctg cag cgg ctc ctg cag atg cag gat gaa gga aga agg	1289
Val Ala Met Leu Gln Arg Leu Leu Gln Met Gln Asp Glu Gly Arg Arg	
345 350 355 360	
cag ccc aga cct gga ggc cgg gac cac atg gag gcc ctg cga tcc ttt	1337
Gln Pro Arg Pro Gly Gly Arg Asp His Met Glu Ala Leu Arg Ser Phe	
365 370 375	
ctg gac cct ggg agc ggt ggc tac agc tgg cag gac gca cac gct gat	1385
Leu Asp Pro Gly Ser Gly Gly Tyr Ser Trp Gln Asp Ala His Ala Asp	
380 385 390	

FIG. 2C

gtg ggg cac ctg gtg ggc acg ctg ggc cga gtg acg gag tgc ctg tcc	1433
Val Gly His Leu Val Gly Thr Leu Gly Arg Val Thr Glu Cys Leu Ser	
395 400 405	
ttg gac aag ctg gag gcg gca ccc tca gag gca gcc ctg gtg tcg cgg	1481
Leu Asp Lys Leu Glu Ala Ala Pro Ser Glu Ala Ala Leu Val Ser Arg	
410 415 420	
gcc ctg caa ctg ctc gcg gaa cat cga ttc tgg gcc ggc gtc gtc ttc	1529
Ala Leu Gln Leu Leu Ala Glu His Arg Phe Trp Ala Gly Val Val Phe	
425 430 435 440	
ttg gga cct gag gac tct tca gac ccc aca gag cac cca acc cca gac	1577
Leu Gly Pro Glu Asp Ser Ser Asp Pro Thr Glu His Pro Thr Pro Asp	
445 450 455	
ctg ggc ccc ggc cac gtg cgc atc aaa atc cgc atg gac att gac gtg	1625
Leu Gly Pro Gly His Val Arg Ile Lys Ile Arg Met Asp Ile Asp Val	
460 465 470	
gtc acg agg acc aat aag atc agg gac agg ttt tgg gac cct ggc cca	1673
Val Thr Arg Thr Asn Lys Ile Arg Asp Arg Phe Trp Asp Pro Gly Pro	
475 480 485	
gcc gcg gac ccc ctg acc gac ctg cgc tac gtg tgg ggc ggc ttc gtg	1721
Ala Ala Asp Pro Leu Thr Asp Leu Arg Tyr Val Trp Gly Gly Phe Val	
490 495 500	
tac ctg caa gac ctg gtg gag cgt gca gcc gtc cgc gtg ctc agc ggc	1769
Tyr Leu Gln Asp Leu Val Glu Arg Ala Ala Val Arg Val Leu Ser Gly	
505 510 515 520	
gcc aac ccc cgg gcc ggc ctc tac ctg cag cag atg ccc tat ccg tgc	1817
Ala Asn Pro Arg Ala Gly Leu Tyr Leu Gln Gln Met Pro Tyr Pro Cys	
525 530 535	
tat gtg gac gac gtg ttc ctg cgt gtg ctg agc cgg tcg ctg ccg ctc	1865
Tyr Val Asp Asp Val Phe Leu Arg Val Leu Ser Arg Ser Leu Pro Leu	
540 545 550	
ttc ctg acg ctg gcc tgg atc tac tcc gtg aca ctg aca gtg aag gcc	1913
Phe Leu Thr Leu Ala Trp Ile Tyr Ser Val Thr Leu Thr Val Lys Ala	
555 560 565	
gtg gtg cgg gag aag gag acg cgg ctg cgg gac acc atg cgc gcc atg	1961
Val Val Arg Glu Lys Glu Thr Arg Leu Arg Asp Thr Met Arg Ala Met	
570 575 580	
ggg ctc agc cgc gcg gtg ctc tgg cta ggc tgg ttc ctc agc tgc ctc	2009
Gly Leu Ser Arg Ala Val Leu Trp Leu Gly Trp Phe Leu Ser Cys Leu	
585 590 595 600	

FIG. 2D

ggg ccc ttc ctg ctc agc gcc gcg ctg ctg gtt ctg gtg ctc aag ctg	2057
Gly Pro Phe Leu Leu Ser Ala Ala Leu Leu Val Leu Val Leu Lys Leu	
605 610 615	
ggg gac atc ctc ccc tac agc cac ccg ggc gtg gtc ttc ctg ttc ttg	2105
Gly Asp Ile Leu Pro Tyr Ser His Pro Gly Val Val Phe Leu Phe Leu	
620 625 630	
gca gcc ttc gcg gtg gcc acg gtg acc cag agc ttc ctg ctc agc gcc	2153
Ala Ala Phe Ala Val Ala Thr Val Thr Gln Ser Phe Leu Leu Ser Ala	
635 640 645	
ttc ttc tcc cgc gcc aac ctg gct gcg gcc tgc ggc ggc ctg gcc tac	2201
Phe Phe Ser Arg Ala Asn Leu Ala Ala Ala Cys Gly Gly Leu Ala Tyr	
650 655 660	
ttc tcc ctc tac ctg ccc tac gtg ctg tgt gtg gct tgg cgg gac cgg	2249
Phe Ser Leu Tyr Leu Pro Tyr Val Leu Cys Val Ala Trp Arg Asp Arg	
665 670 675 680	
ctg ccc gcg ggt ggc cgc gtg gcc gcg agc ctg ctg tcg ccc gtg gcc	2297
Leu Pro Ala Gly Gly Arg Val Ala Ala Ser Leu Leu Ser Pro Val Ala	
685 690 695	
ttc ggc ttc ggc tgc gag agc ctg gct ctg ctg gag gag cag ggc gag	2345
Phe Gly Phe Gly Cys Glu Ser Leu Ala Leu Leu Glu Glu Gln Gly Glu	
700 705 710	
ggc gcg cag tgg cac aac gtg ggc acc cgg cct acg gca gac gtc ttc	2393
Gly Ala Gln Trp His Asn Val Gly Thr Arg Pro Thr Ala Asp Val Phe	
715 720 725	
agc ctg gcc cag gtc tct ggc ctt ctg ctg ctg gac gcg gcg ctc tac	2441
Ser Leu Ala Gln Val Ser Gly Leu Leu Leu Leu Asp Ala Ala Leu Tyr	
730 735 740	
ggc ctc gcc acc tgg tac ctg gaa gct gtg tgc cca ggc cag tac ggg	2489
Gly Leu Ala Thr Trp Tyr Leu Glu Ala Val Cys Pro Gly Gln Tyr Gly	
745 750 755 760	
atc cct gaa cca tgg aat ttt cct ttt cgg agg agc tac tgg tgc gga	2537
Ile Pro Glu Pro Trp Asn Phe Pro Phe Arg Arg Ser Tyr Trp Cys Gly	
765 770 775	
cct cgg ccc ccc aag agt cca gcc cct tgc ccc acc ccg ctg gac cca	2585
Pro Arg Pro Pro Lys Ser Pro Ala Pro Cys Pro Thr Pro Leu Asp Pro	
780 785 790	
aag gtg ctg gta gaa gag gca ccg ccc ggc ctg agt cct ggc gta tcc	2633
Lys Val Leu Val Glu Glu Ala Pro Pro Gly Leu Ser Pro Gly Val Ser	
795 800 805	

[illegible]

gtt Val	cgc Arg	agc Ser	ctg Leu	gag Glu	aag Lys	cgc Arg	ttt Phe	cct Pro	gga Gly	agc Ser	cgc Pro	cag Gln	cca Pro	gcc Ala	ctg Leu	2681
810815820																
cgg Arg	ggg Gly	ctc Leu	agc Ser	ctg Leu	gac Asp	ttc Phe	tac Tyr	cag Gln	ggc Gly	cac His	atc Ile	acc Thr	gcc Ala	ttc Phe	ctg Leu	2729
825830835840																
ggc Gly	cac His	aac Asn	ggg Gly	gcc Ala	ggc Gly	aag Lys	acc Thr	acc Thr	acc Thr	ctg Leu	tcc Ser	atc Ile	ttg Leu	agt Ser	ggc Gly	2777
845850855																
ctc Leu	ttc Phe	cca Pro	ccc Pro	agt Ser	ggt Gly	ggc Gly	tct Ser	gcc Ala	ttc Phe	atc Ile	ctg Leu	ggc Gly	cac His	gac Asp	gtc Val	2825
860865870																
cgc Arg	tcc Ser	agc Ser	atg Met	gcc Ala	gcc Ala	atc Ile	cgg Arg	ccc Pro	cac His	ctg Leu	ggc Gly	gtc Val	tgt Cys	cct Pro	cag Gln	2873
875880885																
tac Tyr	aac Asn	gtg Val	ctg Leu	ttt Phe	gac Asp	atg Met	ctg Leu	acc Thr	gtg Val	gac Asp	gag Glu	cac His	gtc Val	tgg Trp	ttc Phe	2921
890895900																
tat Tyr	ggg Gly	cgg Arg	ctg Leu	aag Lys	ggt Gly	ctg Leu	agt Ser	gcc Ala	gct Ala	gta Val	gtg Val	ggc Gly	ccc Pro	gag Glu	cag Gln	2969
905910915920																
gac Asp	cgt Arg	ctg Leu	ctg Leu	cag Gln	gat Asp	gtg Val	ggg Gly	ctg Leu	gtc Val	tcc Ser	aag Lys	cag Gln	agt Ser	gtg Val	cag Gln	3017
925930935																
act Thr	cgc Arg	cac His	ctc Leu	tct Ser	ggt Gly	ggg Gly	atg Met	caa Gln	cgg Arg	aag Lys	ctg Leu	tcc Ser	gtg Val	gcc Ala	att Ile	3065
940945950																
gcc Ala	ttt Phe	gtg Val	ggc Gly	ggc Gly	tcc Ser	caa Gln	gtt Val	gtt Val	atc Ile	ctg Leu	gac Asp	gag Glu	cct Pro	acg Thr	gct Ala	3113
955960965																
ggc Gly	gtg Val	gat Asp	cct Pro	gct Ala	tcc Ser	cgc Arg	cgc Arg	ggt Gly	att Ile	tgg Trp	gag Glu	ctg Leu	ctg Leu	ctc Leu	aaa Lys	3161
970975980																
tac Tyr	cga Arg	gaa Glu	ggt Gly	cgc Arg	acg Thr	ctg Leu	atc Ile	ctc Leu	tcc Ser	acc Thr	cac His	cac His	ctg Leu	gat Asp	gag Glu	3209
9859909951000																
gca Ala	gag Glu	ctg Leu	ctg Leu	gga Gly	gac Asp	cgt Arg	gtg Val	gct Ala	gtg Val	gtg Val	gca Ala	ggt Gly	ggc Gly	cgc Arg	ttg Leu	3257
100510101015																



FIG. 2F

tgc tgc tgt ggc tcc cca ctc ttc ctg cgc cgt cac ctg ggc tcc ggc	3305
Cys Cys Cys Gly Ser Pro Leu Phe Leu Arg Arg His Leu Gly Ser Gly	
1020 1025 1030	
tac tac ctg acg ctg gtg aag gcc cgc ctg ccc ctg acc acc aat gag	3353
Tyr Tyr Leu Thr Leu Val Lys Ala Arg Leu Pro Leu Thr Thr Asn Glu	
1035 1040 1045	
aag gct gac act gac atg gag ggc agt gtg gac acc agg cag gaa aag	3401
Lys Ala Asp Thr Asp Met Glu Gly Ser Val Asp Thr Arg Gln Glu Lys	
1050 1055 1060	
aag aat ggc agc cag gcc agc aga gtc ggc act cct cag ctg ctg gcc	3449
Lys Asn Gly Ser Gln Gly Ser Arg Val Gly Thr Pro Gln Leu Leu Ala	
1065 1070 1075 1080	
ctg gta cag cac tgg gtg ccc ggg gca cgg ctg gtg gag gag ctg cca	3497
Leu Val Gln His Trp Val Pro Gly Ala Arg Leu Val Glu Glu Leu Pro	
1085 1090 1095	
cac gag ctg gtg ctg gtg ctg ccc tac acg ggt gcc cat gac ggc agc	3545
His Glu Leu Val Leu Val Leu Pro Tyr Thr Gly Ala His Asp Gly Ser	
1100 1105 1110	
ttc gcc aca ctc ttc cga gag cta gac acg cgg ctg gcg gag ctg agg	3593
Phe Ala Thr Leu Phe Arg Glu Leu Asp Thr Arg Leu Ala Glu Leu Arg	
1115 1120 1125	
ctc act ggc tac ggg atc tcc gac acc agc ctc gag gag atc ttc ctg	3641
Leu Thr Gly Tyr Gly Ile Ser Asp Thr Ser Leu Glu Glu Ile Phe Leu	
1130 1135 1140	
aag gtg gtg gag gag tgt gct gcg gac aca gat atg gag gat ggc agc	3689
Lys Val Val Glu Glu Cys Ala Ala Asp Thr Asp Met Glu Asp Gly Ser	
1145 1150 1155 1160	
tgc ggg cag cac cta tgc aca ggc att gct ggc cta gac gta acc ctg	3737
Cys Gly Gln His Leu Cys Thr Gly Ile Ala Gly Leu Asp Val Thr Leu	
1165 1170 1175	
cgg ctc aag atg ccg cca cag gag aca gcg ctg gag aac ggg gaa cca	3785
Arg Leu Lys Met Pro Pro Gln Glu Thr Ala Leu Glu Asn Gly Glu Pro	
1180 1185 1190	
gct ggg tca gcc cca gag act gac cag ggc tct ggg cca gac gcc gtg	3833
Ala Gly Ser Ala Pro Glu Thr Asp Gln Gly Ser Gly Pro Asp Ala Val	
1195 1200 1205	
ggc cgg gta cag ggc tgg gca ctg acc cgc cag cag ctc cag gcc ctg	3881
Gly Arg Val Gln Gly Trp Ala Leu Thr Arg Gln Gln Leu Gln Ala Leu	
1210 1215 1220	

# FIG. 2G

ctt ctc aag cgc ttt ctg ctt gcc cgc cgc agc cgc cgc ggc ctg ttc	3929
Leu Leu Lys Arg Phe Leu Leu Ala Arg Arg Ser Arg Arg Gly Leu Phe	
1225 1230 1235 1240	
gcc cag atc gtg ctg cct gcc ctc ttt gtg ggc ctg gcc ctc gtg ttc	3977
Ala Gln Ile Val Leu Pro Ala Leu Phe Val Gly Leu Ala Leu Val Phe	
1245 1250 1255	
agc ctc atc gtg cct cct ttc ggg cac tac ccg gct ctg cgg ctc agt	4025
Ser Leu Ile Val Pro Pro Phe Gly His Tyr Pro Ala Leu Arg Leu Ser	
1260 1265 1270	
ccc acc atg tac ggt gct cag gtg tcc ttc ttc agt gag gac gcc cca	4073
Pro Thr Met Tyr Gly Ala Gln Val Ser Phe Phe Ser Glu Asp Ala Pro	
1275 1280 1285	
ggg gac cct gga cgt gcc cgg ctg ctc gag gcg ctg ctg cag gag gca	4121
Gly Asp Pro Gly Arg Ala Arg Leu Leu Glu Ala Leu Leu Gln Glu Ala	
1290 1295 1300	
gga ctg gag gag ccc cca gtg cag cat agc tcc cac agg ttc tcg gca	4169
Gly Leu Glu Glu Pro Pro Val Gln His Ser Ser His Arg Phe Ser Ala	
1305 1310 1315 1320	
cca gaa gtt cct gct gaa gtg gcc aag gtc ttg gcc agt ggc aac tgg	4217
Pro Glu Val Pro Ala Glu Val Ala Lys Val Leu Ala Ser Gly Asn Trp	
1325 1330 1335	
acc cca gag tct cca tcc cca gcc tgc cag tgt agc cag ccc ggt gcc	4265
Thr Pro Glu Ser Pro Ser Pro Ala Cys Gln Cys Ser Gln Pro Gly Ala	
1340 1345 1350	
cgg cgc ctg ctg ccc gac tgc ccg gct gca gct ggt ggt ccc cct ccg	4313
Arg Arg Leu Leu Pro Asp Cys Pro Ala Ala Ala Gly Gly Pro Pro Pro	
1355 1360 1365	
ccc cag gca gtg acc ggc tct ggg gaa gtg gtt cag aac ctg aca ggc	4361
Pro Gln Ala Val Thr Gly Ser Gly Glu Val Val Gln Asn Leu Thr Gly	
1370 1375 1380	
cgg aac ctg tct gac ttc ctg gtc aag acc tac ccg cgc ctg gtg cgc	4409
Arg Asn Leu Ser Asp Phe Leu Val Lys Thr Tyr Pro Arg Leu Val Arg	
1385 1390 1395 1400	
cag ggc ctg aag act aag aag tgg gtg aat gag gtc agg tac gga ggc	4457
Gln Gly Leu Lys Thr Lys Lys Trp Val Asn Glu Val Arg Tyr Gly Gly	
1405 1410 1415	
ttc tcg ctg ggg ggc cga gac cca ggc ctg ccc tcg ggc caa gag ttg	4505
Phe Ser Leu Gly Gly Arg Asp Pro Gly Leu Pro Ser Gly Gln Glu Leu	
1420 1425 1430	

# FIG. 2H

ggc cgc tca gtg gag gag ttg tgg gcg ctg ctg agt ccc ctg cct ggc	4553
Gly Arg Ser Val Glu Glu Leu Trp Ala Leu Leu Ser Pro Leu Pro Gly	
1435 1440 1445	
ggg gcc ctc gac cgt gtc ctg aaa aac ctc aca gcc tgg gct cac agc	4601
Gly Ala Leu Asp Arg Val Leu Lys Asn Leu Thr Ala Trp Ala His Ser	
1450 1455 1460	
ctg gat gct cag gac agt ctc aag atc tgg ttc aac aac aaa ggc tgg	4649
Leu Asp Ala Gln Asp Ser Leu Lys Ile Trp Phe Asn Asn Lys Gly Trp	
1465 1470 1475 1480	
cac tcc atg gtg gcc ttt gtc aac cga gcc agc aac gca atc ctc cgt	4697
His Ser Met Val Ala Phe Val Asn Arg Ala Ser Asn Ala Ile Leu Arg	
1485 1490 1495	
gct cac ctg ccc cca ggc ccg gcc cgc cac gcc cac agc atc acc aca	4745
Ala His Leu Pro Pro Gly Pro Ala Arg His Ala His Ser Ile Thr Thr	
1500 1505 1510	
ctc aac cac ccc ttg aac ctc acc aag gag cag ctg tct gag gct gca	4793
Leu Asn His Pro Leu Asn Leu Thr Lys Glu Gln Leu Ser Glu Ala Ala	
1515 1520 1525	
ctg atg gcc tcc tcg gtg gac gtc ctc gtc tcc atc tgt gtg gtc ttt	4841
Leu Met Ala Ser Ser Val Asp Val Leu Val Ser Ile Cys Val Val Phe	
1530 1535 1540	
gcc atg tcc ttt gtc ccg gcc agc ttc act ctt gtc ctc att gag gag	4889
Ala Met Ser Phe Val Pro Ala Ser Phe Thr Leu Val Leu Ile Glu Glu	
1545 1550 1555 1560	
cga gtc acc cga gcc aag cac ctg cag ctc atg ggg ggc ctg tcc ccc	4937
Arg Val Thr Arg Ala Lys His Leu Gln Leu Met Gly Gly Leu Ser Pro	
1565 1570 1575	
acc ctc tac tgg ctt ggc aac ttt ctc tgg gac atg tgt aac tac ttg	4985
Thr Leu Tyr Trp Leu Gly Asn Phe Leu Trp Asp Met Cys Asn Tyr Leu	
1580 1585 1590	
gtg cca gca tgc atc gtg gtg ctc atc ttt ctg gcc ttc cag cag agg	5033
Val Pro Ala Cys Ile Val Val Leu Ile Phe Leu Ala Phe Gln Gln Arg	
1595 1600 1605	
gca tat gtg gcc cct gcc aac ctg cct gct ctc ctg ctg ttg cta cta	5081
Ala Tyr Val Ala Pro Ala Asn Leu Pro Ala Leu Leu Leu Leu Leu	
1610 1615 1620	
ctg tat ggc tgg tcg atc aca ccg ctc atg tac cca gcc tcc ttc ttc	5129
Leu Tyr Gly Trp Ser Ile Thr Pro Leu Met Tyr Pro Ala Ser Phe Phe	
1625 1630 1635 1640	

# FIG. 2I

ttc tcc gtg ccc agc aca gcc tat gtg gtg ctc acc tgc ata aac ctc	5177
Phe Ser Val Pro Ser Thr Ala Tyr Val Val Leu Thr Cys Ile Asn Leu	
1645 1650 1655	
ttt att ggc atc aat gga agc atg gcc acc ttt gtg ctt gag ctc ttc	5225
Phe Ile Gly Ile Asn Gly Ser Met Ala Thr Phe Val Leu Glu Leu Phe	
1660 1665 1670	
tct gat cag aag ctg cag gag gtg agc cgg atc ttg aaa cag gtc ttc	5273
Ser Asp Gln Lys Leu Gln Glu Val Ser Arg Ile Leu Lys Gln Val Phe	
1675 1680 1685	
ctt atc ttc ccc cac ttc tgc ttg ggc cgg ggg ctc att gac atg gtg	5321
Leu Ile Phe Pro His Phe Cys Leu Gly Arg Gly Leu Ile Asp Met Val	
1690 1695 1700	
cgg aac cag gcc atg gct gat gcc ttt gag cgc ttg gga gac agg cag	5369
Arg Asn Gln Ala Met Ala Asp Ala Phe Glu Arg Leu Gly Asp Arg Gln	
1705 1710 1715 1720	
ttc cag tca ccc ctg cgc tgg gag gtg gtc ggc aag aac ctc ttg gcc	5417
Phe Gln Ser Pro Leu Arg Trp Glu Val Val Gly Lys Asn Leu Leu Ala	
1725 1730 1735	
atg gtg ata cag ggg ccc ctc ttc ctt ctc ttc aca cta ctg ctg cag	5465
Met Val Ile Gln Gly Pro Leu Phe Leu Leu Phe Thr Leu Leu Leu Gln	
1740 1745 1750	
cac cga agc caa ctc ctg cca cag ccc agg gtg agg tct ctg cca ctc	5513
His Arg Ser Gln Leu Leu Pro Gln Pro Arg Val Arg Ser Leu Pro Leu	
1755 1760 1765	
ctg gga gag gag gac gag gat gta gcc cgt gaa cgg gag cgg gtg gtc	5561
Leu Gly Glu Glu Asp Glu Asp Val Ala Arg Glu Arg Glu Arg Val Val	
1770 1775 1780	
caa gga gcc acc cag ggg gat gtg ttg gtg ctg agg aac ttg acc aag	5609
Gln Gly Ala Thr Gln Gly Asp Val Leu Val Leu Arg Asn Leu Thr Lys	
1785 1790 1795 1800	
gta tac cgt ggg cag agg atg cca gct gtt gac cgc ttg tgc ctg ggg	5657
Val Tyr Arg Gly Gln Arg Met Pro Ala Val Asp Arg Leu Cys Leu Gly	
1805 1810 1815	
att ccc cct ggt gag tgt ttt ggg ctg ctg ggt gtg aat gga gca ggg	5705
Ile Pro Pro Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly	
1820 1825 1830	
aag acg tcc acg ttt cgc atg gtg acg ggg gac aca ttg gcc agc agg	5753
Lys Thr Ser Thr Phe Arg Met Val Thr Gly Asp Thr Leu Ala Ser Arg	
1835 1840 1845	

FIG. 2J

ggc gag gct gtg ctg gca ggc cac agc gtg gcc cgg gaa ccc agt gct	5801
Gly Glu Ala Val Leu Ala Gly His Ser Val Ala Arg Glu Pro Ser Ala	
1850 1855 1860	
gcg cac ctc agc atg gga tac tgc cct caa tcc gat gcc atc ttt gag	5849
Ala His Leu Ser Met Gly Tyr Cys Pro Gln Ser Asp Ala Ile Phe Glu	
1865 1870 1875 1880	
ctg ctg acg ggc cgc gag cac ctg gag ctg ctt gcg cgc ctg cgc ggt	5897
Leu Leu Thr Gly Arg Glu His Leu Glu Leu Leu Ala Arg Leu Arg Gly	
1885 1890 1895	
gtc ccg gag gcc cag gtt gcc cag acc gct ggc tca ggc ctg gcg cgt	5945
Val Pro Glu Ala Gln Val Ala Gln Thr Ala Gly Ser Gly Leu Ala Arg	
1900 1905 1910	
ctg gga ctc tca tgg tac gca gac cgg cct gca ggc acc tac agc gga	5993
Leu Gly Leu Ser Trp Tyr Ala Asp Arg Pro Ala Gly Thr Tyr Ser Gly	
1915 1920 1925	
ggg aac aaa cgc aag ctg gcg acg gcc ctg gcg ctg gtt ggg gac cca	6041
Gly Asn Lys Arg Lys Leu Ala Thr Ala Leu Ala Leu Val Gly Asp Pro	
1930 1935 1940	
gcc gtg gtg ttt ctg gac gag ccg acc aca ggc atg gac ccc agc gcg	6089
Ala Val Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Ser Ala	
1945 1950 1955 1960	
cgg cgc ttc ctt tgg aac agc ctt ttg gcc gtg gtg cgg gag ggc cgt	6137
Arg Arg Phe Leu Trp Asn Ser Leu Leu Ala Val Val Arg Glu Gly Arg	
1965 1970 1975	
tca gtg atg ctc acc tcc cat agc atg gag gag tgt gaa gcg ctc tgc	6185
Ser Val Met Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys	
1980 1985 1990	
tcg cgc cta gcc atc atg gtg aat ggg cgg ttc cgc tgc ctg ggc agc	6233
Ser Arg Leu Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser	
1995 2000 2005	
ccg caa cat ctc aag ggc aga ttc gcg gcg ggt cac aca ctg acc ctg	6281
Pro Gln His Leu Lys Gly Arg Phe Ala Ala Gly His Thr Leu Thr Leu	
2010 2015 2020	
cgg gtg ccc gcc gca agg tcc cag ccg gca gcg gcc ttc gtg gcg gcc	6329
Arg Val Pro Ala Ala Arg Ser Gln Pro Ala Ala Ala Phe Val Ala Ala	
2025 2030 2035 2040	
gag ttc cct ggg tcg gag ctg cgc gag gca cat gga ggc cgc ctg cgc	6377
Glu Phe Pro Gly Ser Glu Leu Arg Glu Ala His Gly Gly Arg Leu Arg	
2045 2050 2055	

FIG. 2K

ttc cag ctg ccg ccg gga ggg cgc tgc gcc ctg gcg cgc gtc ttt gga	6425
Phe Gln Leu Pro Pro Gly Gly Arg Cys Ala Leu Ala Arg Val Phe Gly	
2060 2065 2070	
gag ctg gcg gtg cac ggc gca gag cac ggc gtg gag gac ttt tcc gtg	6473
Glu Leu Ala Val His Gly Ala Glu His Gly Val Glu Asp Phe Ser Val	
2075 2080 2085	
agc cag acg atg ctg gag gag gta ttc ttg tac ttc tcc aag gac cag	6521
Ser Gln Thr Met Leu Glu Glu Val Phe Leu Tyr Phe Ser Lys Asp Gln	
2090 2095 2100	
ggg aag gac gag gac acc gaa gag cag aag gag gca gga gtg gga gtg	6569
Gly Lys Asp Glu Asp Thr Glu Glu Gln Lys Glu Ala Gly Val Gly Val	
2105 2110 2115 2120	
gac ccc gcg cca ggc ctg cag cac ccc aaa cgc gtc agc cag ttc ctc	6617
Asp Pro Ala Pro Gly Leu Gln His Pro Lys Arg Val Ser Gln Phe Leu	
2125 2130 2135	
gat gac cct agc act gcc gag act gtg ctc tga gcctccctcc cctgcggggc	6670
Asp Asp Pro Ser Thr Ala Glu Thr Val Leu	
2140 2145	
cgcggggagg ccctgggaat ggcaagggca aggtagagtg cctaggagcc ctggactcag	6730
gctggcagag gggctggtgc cctggagaaa ataaagagaa ggctggagag aagccgtgct	6790
ggtgaaaaaa aaaa	6804

6804

[illegible]

atg	gtc	tgc	ctg	gga	act	ggc	cag	agc	gct	gga	ccc	cta	gtg	agt	gtt	48
Met	Val	Cys	Leu	Gly	Thr	Gly	Gln	Ser	Ala	Gly	Pro	Leu	Val	Ser	Val	
1			5			10			15							
caa	aat	cat	tgt	ccc	cct	tgt	ggg	ctt	tct	ccc	cag	gaa	tcc	ctg	ggg	96
Gln	Asn	His	Cys	Pro	Pro	Cys	Gly	Leu	Ser	Pro	Gln	Glu	Ser	Leu	Gly	
20			25			30										
ttg	gca	ctg	ggc	caa	gcc	cag	gag	ccc	ttg	cac	agc	ttg	ttg	gag	gcc	144
Leu	Ala	Leu	Gly	Gln	Ala	Gln	Glu	Pro	Leu	His	Ser	Leu	Leu	Glu	Ala	
35			40			45										
gct	ggg	gac	ctg	gcc	cag	gag	ctc	ctg	gcg	ctg	cgc	agc	ctg	gtg	gag	192
Ala	Gly	Asp	Leu	Ala	Gln	Glu	Leu	Leu	Ala	Leu	Arg	Ser	Leu	Val	Glu	
50			55			60										
ctt	cgg	gca	ctg	ctg	cag	aga	ccc	cga	ggg	acc	agc	ggc	ccc	ctg	gag	240
Leu	Arg	Ala	Leu	Leu	Gln	Arg	Pro	Arg	Gly	Thr	Ser	Gly	Pro	Leu	Glu	
65			70			75							80			
ttg	ctg	tca	gag	gcc	ctc	tgc	agt	gtc	agg	gga	cct	agc	agc	aca	gtg	288
Leu	Leu	Ser	Glu	Ala	Leu	Cys	Ser	Val	Arg	Gly	Pro	Ser	Ser	Thr	Val	
85			90			95										
ggc	ccc	tcc	ctc	aac	tgg	tac	gag	gct	agt	gac	ctg	atg	gag	ctg	gtg	336
Gly	Pro	Ser	Leu	Asn	Trp	Tyr	Glu	Ala	Ser	Asp	Leu	Met	Glu	Leu	Val	
100			105			110										
ggg	cag	gag	cca	gaa	tcc	gcc	ctg	cca	gac	agc	agc	ctg	agc	ccc	gcc	384
Gly	Gln	Glu	Pro	Glu	Ser	Ala	Leu	Pro	Asp	Ser	Ser	Leu	Ser	Pro	Ala	
115			120			125										
tgc	tcg	gag	ctg	att	gga	gcc	ctg	gac	agc	cac	ccg	ctg	tcc	cgc	ctg	432
Cys	Ser	Glu	Leu	Ile	Gly	Ala	Leu	Asp	Ser	His	Pro	Leu	Ser	Arg	Leu	
130			135			140										
ctc	tgg	aga	cgc	ctg	aag	cct	ctg	atc	ctc	ggg	aag	cta	ctc	ttt	gca	480
Leu	Trp	Arg	Arg	Leu	Lys	Pro	Leu	Ile	Leu	Gly	Lys	Leu	Leu	Phe	Ala	
145			150			155							160			
cca	gat	aca	cct	ttt	acc	cgg	aag	ctc	atg	gcc	cag	gtg	aac	cgg	acc	528
Pro	Asp	Thr	Pro	Phe	Thr	Arg	Lys	Leu	Met	Ala	Gln	Val	Asn	Arg	Thr	
165			170			175										
ttc	gag	gag	ctc	acc	ctg	ctg	agg	gat	gtc	cgg	gag	gtg	tgg	gag	atg	576
Phe	Glu	Glu	Leu	Thr	Leu	Leu	Arg	Asp	Val	Arg	Glu	Val	Trp	Glu	Met	
180			185			190										
ctg	gga	ccc	cgg	atc	ttc	acc	ttc	atg	aac	gac	agt	tcc	aat	gtg	gcc	624
Leu	Gly	Pro	Arg	Ile	Phe	Thr	Phe	Met	Asn	Asp	Ser	Ser	Asn	Val	Ala	
195			200			205										

# FIG. 3B

atg ctg cag cgg ctc ctg cag atg cag gat gaa gga aga agg cag ccc	672
Met Leu Gln Arg Leu Leu Gln Met Gln Asp Glu Gly Arg Arg Gln Pro	
210 215 220	
aga cct gga ggc cgg gac cac atg gag gcc ctg cga tcc ttt ctg gac	720
Arg Pro Gly Gly Arg Asp His Met Glu Ala Leu Arg Ser Phe Leu Asp	
225 230 235 240	
cct ggg agc ggt ggc tac agc tgg cag gac gca cac gct gat gtg ggg	768
Pro Gly Ser Gly Gly Tyr Ser Trp Gln Asp Ala His Ala Asp Val Gly	
245 250 255	
cac ctg gtg ggc acg ctg ggc cga gtg acg gag tgc ctg tcc ttg gac	816
His Leu Val Gly Thr Leu Gly Arg Val Thr Glu Cys Leu Ser Leu Asp	
260 265 270	
aag ctg gag gcg gca ccc tca gag gca gcc ctg gtg tcg cgg gcc ctg	864
Lys Leu Glu Ala Ala Pro Ser Glu Ala Ala Leu Val Ser Arg Ala Leu	
275 280 285	
caa ctg ctc gcg gaa cat cga ttc tgg gcc ggc gtc gtc ttc ttg gga	912
Gln Leu Leu Ala Glu His Arg Phe Trp Ala Gly Val Val Phe Leu Gly	
290 295 300	
cct gag gac tct tca gac ccc aca gag cac cca acc cca gac ctg ggc	960
Pro Glu Asp Ser Ser Asp Pro Thr Glu His Pro Thr Pro Asp Leu Gly	
305 310 315 320	
ccc ggc cac gtg cgc atc aaa atc cgc atg gac att gac gtg gtc acg	1008
Pro Gly His Val Arg Ile Lys Ile Arg Met Asp Ile Asp Val Val Thr	
325 330 335	
agg acc aat aag atc agg gac agg ttt tgg gac cct ggc cca gcc gcg	1056
Arg Thr Asn Lys Ile Arg Asp Arg Phe Trp Asp Pro Gly Pro Ala Ala	
340 345 350	
gac ccc ctg acc gac ctg cgc tac gtg tgg ggc ggc ttc gtg tac ctg	1104
Asp Pro Leu Thr Asp Leu Arg Tyr Val Trp Gly Gly Phe Val Tyr Leu	
355 360 365	
caa gac ctg gtg gag cgt gca gcc gtc cgc gtg ctc agc ggc gcc aac	1152
Gln Asp Leu Val Glu Arg Ala Ala Val Arg Val Leu Ser Gly Ala Asn	
370 375 380	
ccc cgg gcc ggc ctc tac ctg cag cag atg ccc tat ccg tgc tat gtg	1200
Pro Arg Ala Gly Leu Tyr Leu Gln Gln Met Pro Tyr Pro Cys Tyr Val	
385 390 395 400	
gac gac gtg ttc ctg cgt gtg ctg agc cgg tcg ctg ccg ctc ttc ctg	1248
Asp Asp Val Phe Leu Arg Val Leu Ser Arg Ser Leu Pro Leu Phe Leu	
405 410 415	



FIG. 3C

acg ctg gcc tgg atc tac tcc gtg aca ctg aca gtg aag gcc gtg gtg	1296
Thr Leu Ala Trp Ile Tyr Ser Val Thr Leu Thr Val Lys Ala Val Val	
420 425 430	
cgg gag aag gag acg cgg ctg cgg gac acc atg cgc gcc atg ggg ctc	1344
Arg Glu Lys Glu Thr Arg Leu Arg Asp Thr Met Arg Ala Met Gly Leu	
435 440 445	
agc cgc gcg gtg ctc tgg cta ggc tgg ttc ctc agc tgc ctc ggg ccc	1392
Ser Arg Ala Val Leu Trp Leu Gly Trp Phe Leu Ser Cys Leu Gly Pro	
450 455 460	
ttc ctg ctc agc gcc gcg ctg ctg gtt ctg gtg ctc aag ctg ggg gac	1440
Phe Leu Leu Ser Ala Ala Leu Leu Val Leu Val Leu Lys Leu Gly Asp	
465 470 475 480	
atc ctc ccc tac agc cac ccg ggc gtg gtc ttc ctg ttc ttg gca gcc	1488
Ile Leu Pro Tyr Ser His Pro Gly Val Val Phe Leu Phe Leu Ala Ala	
485 490 495	
ttc gcg gtg gcc acg gtg acc cag agc ttc ctg ctc agc gcc ttc ttc	1536
Phe Ala Val Ala Thr Val Thr Gln Ser Phe Leu Leu Ser Ala Phe Phe	
500 505 510	
tcc cgc gcc aac ctg gct gcg gcc tgc ggc ggc ctg gcc tac ttc tcc	1584
Ser Arg Ala Asn Leu Ala Ala Ala Cys Gly Gly Leu Ala Tyr Phe Ser	
515 520 525	
ctc tac ctg ccc tac gtg ctg tgt gtg gct tgg cgg gac cgg ctg ccc	1632
Leu Tyr Leu Pro Tyr Val Leu Cys Val Ala Trp Arg Asp Arg Leu Pro	
530 535 540	
gcg ggt ggc cgc gtg gcc gcg agc ctg ctg tgc ccc gtg gcc ttc ggc	1680
Ala Gly Gly Arg Val Ala Ala Ser Leu Leu Ser Pro Val Ala Phe Gly	
545 550 555 560	
ttc ggc tgc gag agc ctg gct ctg ctg gag gag cag ggc gag ggc gcg	1728
Phe Gly Cys Glu Ser Leu Ala Leu Leu Glu Glu Gln Gly Glu Gly Ala	
565 570 575	
cag tgg cac aac gtg ggc acc cgg cct acg gca gac gtc ttc agc ctg	1776
Gln Trp His Asn Val Gly Thr Arg Pro Thr Ala Asp Val Phe Ser Leu	
580 585 590	
gcc cag gtc tct ggc ctt ctg ctg ctg gac gcg gcg ctc tac ggc ctc	1824
Ala Gln Val Ser Gly Leu Leu Leu Leu Asp Ala Ala Leu Tyr Gly Leu	
595 600 605	
gcc acc tgg tac ctg gaa gct gtg tgc cca ggc cag tac ggg atc cct	1872
Ala Thr Trp Tyr Leu Glu Ala Val Cys Pro Gly Gln Tyr Gly Ile Pro	
610 615 620	

FIG. 3D

gaa cca tgg aat ttt cct ttt cgg agg agc tac tgg tgc gga cct cgg	1920
Glu Pro Trp Asn Phe Pro Phe Arg Arg Ser Tyr Trp Cys Gly Pro Arg	
625 630 635 640	
ccc ccc aag agt cca gcc cct tgc ccc acc ccg ctg gac cca aag gtg	1968
Pro Pro Lys Ser Pro Ala Pro Cys Pro Thr Pro Leu Asp Pro Lys Val	
645 650 655	
ctg gta gaa gag gca ccg ccc ggc ctg agt cct ggc gta tcc gtt cgc	2016
Leu Val Glu Glu Ala Pro Pro Gly Leu Ser Pro Gly Val Ser Val Arg	
660 665 670	
agc ctg gag aag cgc ttt cct gga agc ccg cag cca gcc ctg cgg ggg	2064
Ser Leu Glu Lys Arg Phe Pro Gly Ser Pro Gln Pro Ala Leu Arg Gly	
675 680 685	
ctc agc ctg gac ttc tac cag ggc cac atc acc gcc ttc ctg ggc cac	2112
Leu Ser Leu Asp Phe Tyr Gln Gly His Ile Thr Ala Phe Leu Gly His	
690 695 700	
aac ggg gcc ggc aag acc acc acc ctg tcc atc ttg agt ggc ctc ttc	2160
Asn Gly Ala Gly Lys Thr Thr Leu Ser Ile Leu Ser Gly Leu Phe	
705 710 715 720	
cca ccc agt ggt ggc tct gcc ttc atc ctg ggc cac gac gtc cgc tcc	2208
Pro Pro Ser Gly Gly Ser Ala Phe Ile Leu Gly His Asp Val Arg Ser	
725 730 735	
agc atg gcc gcc atc cgg ccc cac ctg ggc gtc tgt cct cag tac aac	2256
Ser Met Ala Ala Ile Arg Pro His Leu Gly Val Cys Pro Gln Tyr Asn	
740 745 750	
gtg ctg ttt gac atg ctg acc gtg gac gag cac gtc tgg ttc tat ggg	2304
Val Leu Phe Asp Met Leu Thr Val Asp Glu His Val Trp Phe Tyr Gly	
755 760 765	
cgg ctg aag ggt ctg agt gcc gct gta gtg ggc ccc gag cag gac cgt	2352
Arg Leu Lys Gly Leu Ser Ala Ala Val Val Gly Pro Glu Gln Asp Arg	
770 775 780	
ctg ctg cag gat gtg ggg ctg gtc tcc aag cag agt gtg cag act cgc	2400
Leu Leu Gln Asp Val Gly Leu Val Ser Lys Gln Ser Val Gln Thr Arg	
785 790 795 800	
cac ctc tct ggt ggg atg caa cgg aag ctg tcc gtg gcc att gcc ttt	2448
His Leu Ser Gly Gly Met Gln Arg Lys Leu Ser Val Ala Ile Ala Phe	
805 810 815	
gtg ggc ggc tcc caa gtt gtt atc ctg gac gag cct acg gct ggc gtg	2496
Val Gly Gly Ser Gln Val Val Ile Leu Asp Glu Pro Thr Ala Gly Val	
820 825 830	

FIG. 3E

gat cct gct tcc cgc cgc ggt att tgg gag ctg ctg ctc aaa tac cga	2544
Asp Pro Ala Ser Arg Arg Gly Ile Trp Glu Leu Leu Leu Lys Tyr Arg	
835 840 845	
 gaa ggt cgc acg ctg atc ctc tcc acc cac cac ctg gat gag gca gag	2592
Glu Gly Arg Thr Leu Ile Leu Ser Thr His His Leu Asp Glu Ala Glu	
850 855 860	
 ctg ctg gga gac cgt gtg gct gtg gtg gca ggt ggc cgc ttg tgc tgc	2640
Leu Leu Gly Asp Arg Val Ala Val Val Ala Gly Gly Arg Leu Cys Cys	
865 870 875 880	
 tgt ggc tcc cca ctc ttc ctg cgc cgt cac ctg ggc tcc ggc tac tac	2688
Cys Gly Ser Pro Leu Phe Leu Arg Arg His Leu Gly Ser Gly Tyr Tyr	
885 890 895	
 ctg acg ctg gtg aag gcc cgc ctg ccc ctg acc acc aat gag aag gct	2736
Leu Thr Leu Val Lys Ala Arg Leu Pro Leu Thr Thr Asn Glu Lys Ala	
900 905 910	
 gac act gac atg gag ggc agt gtg gac acc agg cag gaa aag aag aat	2784
Asp Thr Asp Met Glu Gly Ser Val Asp Thr Arg Gln Glu Lys Lys Asn	
915 920 925	
 ggc agc cag ggc agc aga gtc ggc act cct cag ctg ctg gcc ctg gta	2832
Gly Ser Gln Gly Ser Arg Val Gly Thr Pro Gln Leu Leu Ala Leu Val	
930 935 940	
 cag cac tgg gtg ccc ggg gca cgg ctg gtg gag gag ctg cca cac gag	2880
Gln His Trp Val Pro Gly Ala Arg Leu Val Glu Glu Leu Pro His Glu	
945 950 955 960	
 ctg gtg ctg gtg ctg ccc tac acg ggt gcc cat gac ggc agc ttc gcc	2928
Leu Val Leu Val Leu Pro Tyr Thr Gly Ala His Asp Gly Ser Phe Ala	
965 970 975	
 aca ctc ttc cga gag cta gac acg cgg ctg gcg gag ctg agg ctc act	2976
Thr Leu Phe Arg Glu Leu Asp Thr Arg Leu Ala Glu Leu Arg Leu Thr	
980 985 990	
 ggc tac ggg atc tcc gac acc agc ctc gag gag atc ttc ctg aag gtg	3024
Gly Tyr Gly Ile Ser Asp Thr Ser Leu Glu Glu Ile Phe Leu Lys Val	
995 1000 1005	
 gtg gag gag tgt gct gcg gac aca gat atg gag gat ggc agc tgc ggg	3072
Val Glu Glu Cys Ala Ala Asp Thr Asp Met Glu Asp Gly Ser Cys Gly	
1010 1015 1020	
 cag cac cta tgc aca ggc att gct ggc cta gac gta acc ctg cgg ctc	3120
Gln His Leu Cys Thr Gly Ile Ala Gly Leu Asp Val Thr Leu Arg Leu	
1025 1030 1035 1040	

FIG. 3F

aag atg ccg cca cag gag aca gcg ctg gag aac ggg gaa cca gct ggg	3168
Lys Met Pro Pro Gln Glu Thr Ala Leu Glu Asn Gly Glu Pro Ala Gly	
1045 1050 1055	
tca gcc cca gag act gac cag ggc tct ggg cca gac gcc gtg ggc cgg	3216
Ser Ala Pro Glu Thr Asp Gln Gly Ser Gly Pro Asp Ala Val Gly Arg	
1060 1065 1070	
gta cag ggc tgg gca ctg acc cgc cag cag ctc cag gcc ctg ctt ctc	3264
Val Gln Gly Trp Ala Leu Thr Arg Gln Gln Leu Gln Ala Leu Leu Leu	
1075 1080 1085	
aag cgc ttt ctg ctt gcc cgc cgc agc cgc cgc ggc ctg ttc gcc cag	3312
Lys Arg Phe Leu Leu Ala Arg Arg Ser Arg Arg Gly Leu Phe Ala Gln	
1090 1095 1100	
atc gtg ctg cct gcc ctc ttt gtg ggc ctg gcc ctc gtg ttc agc ctc	3360
Ile Val Leu Pro Ala Leu Phe Val Gly Leu Ala Leu Val Phe Ser Leu	
1105 1110 1115 1120	
atc gtg cct cct ttc ggg cac tac ccg gct ctg cgg ctc agt ccc acc	3408
Ile Val Pro Pro Phe Gly His Tyr Pro Ala Leu Arg Leu Ser Pro Thr	
1125 1130 1135	
atg tac ggt gct cag gtg tcc ttc ttc agt gag gac gcc cca ggg gac	3456
Met Tyr Gly Ala Gln Val Ser Phe Phe Ser Glu Asp Ala Pro Gly Asp	
1140 1145 1150	
cct gga cgt gcc cgg ctg ctc gag gcg ctg ctg cag gag gca gga ctg	3504
Pro Gly Arg Ala Arg Leu Leu Glu Ala Leu Leu Gln Glu Ala Gly Leu	
1155 1160 1165	
gag gag ccc cca gtg cag cat agc tcc cac agg ttc tcg gca cca gaa	3552
Glu Glu Pro Pro Val Gln His Ser Ser His Arg Phe Ser Ala Pro Glu	
1170 1175 1180	
gtt cct gct gaa gtg gcc aag gtc ttg gcc agt ggc aac tgg acc cca	3600
Val Pro Ala Glu Val Ala Lys Val Leu Ala Ser Gly Asn Trp Thr Pro	
1185 1190 1195 1200	
gag tct cca tcc cca gcc tgc cag tgt agc cag ccc ggt gcc cgg cgc	3648
Glu Ser Pro Ser Pro Ala Cys Gln Cys Ser Gln Pro Gly Ala Arg Arg	
1205 1210 1215	
ctg ctg ccc gac tgc ccg gct gca gct ggt ggt ccc cct ccg ccc cag	3696
Leu Leu Pro Asp Cys Pro Ala Ala Ala Gly Gly Pro Pro Pro Gln	
1220 1225 1230	
gca gtg acc ggc tct ggg gaa gtg gtt cag aac ctg aca ggc cgg aac	3744
Ala Val Thr Gly Ser Gly Glu Val Val Gln Asn Leu Thr Gly Arg Asn	
1235 1240 1245	

# FIG. 3G

ctg tct gac ttc ctg gtc aag acc tac ccg cgc ctg gtg cgc cag ggc	3792
Leu Ser Asp Phe Leu Val Lys Thr Tyr Pro Arg Leu Val Arg Gln Gly	
1250 1255 1260	
ctg aag act aag aag tgg gtg aat gag gtc agg tac gga ggc ttc tcg	3840
Leu Lys Thr Lys Lys Trp Val Asn Glu Val Arg Tyr Gly Gly Phe Ser	
1265 1270 1275 1280	
ctg ggg ggc cga gac cca ggc ctg ccc tcg ggc caa gag ttg ggc cgc	3888
Leu Gly Gly Arg Asp Pro Gly Leu Pro Ser Gly Gln Glu Leu Gly Arg	
1285 1290 1295	
tca gtg gag gag ttg tgg gcg ctg ctg agt ccc ctg cct ggc ggg gcc	3936
Ser Val Glu Glu Leu Trp Ala Leu Leu Ser Pro Leu Pro Gly Gly Ala	
1300 1305 1310	
ctc gac cgt gtc ctg aaa aac ctc aca gcc tgg gct cac agc ctg gat	3984
Leu Asp Arg Val Leu Lys Asn Leu Thr Ala Trp Ala His Ser Leu Asp	
1315 1320 1325	
gct cag gac agt ctc aag atc tgg ttc aac aac aaa ggc tgg cac tcc	4032
Ala Gln Asp Ser Leu Lys Ile Trp Phe Asn Asn Lys Gly Trp His Ser	
1330 1335 1340	
atg gtg gcc ttt gtc aac cga gcc agc aac gca atc ctc cgt gct cac	4080
Met Val Ala Phe Val Asn Arg Ala Ser Asn Ala Ile Leu Arg Ala His	
1345 1350 1355 1360	
ctg ccc cca ggc ccg gcc cgc cac gcc cac agc atc acc aca ctc aac	4128
Leu Pro Pro Gly Pro Ala Arg His Ala His Ser Ile Thr Thr Leu Asn	
1365 1370 1375	
cac ccc ttg aac ctc acc aag gag cag ctg tct gag gct gca ctg atg	4176
His Pro Leu Asn Leu Thr Lys Glu Gln Leu Ser Glu Ala Ala Leu Met	
1380 1385 1390	
gcc tcc tcg gtg gac gtc ctc gtc tcc atc tgt gtg gtc ttt gcc atg	4224
Ala Ser Ser Val Asp Val Leu Val Ser Ile Cys Val Val Phe Ala Met	
1395 1400 1405	
tcc ttt gtc ccg gcc agc ttc act ctt gtc ctc att gag gag cga gtc	4272
Ser Phe Val Pro Ala Ser Phe Thr Leu Val Leu Ile Glu Glu Arg Val	
1410 1415 1420	
acc cga gcc aag cac ctg cag ctc atg ggg ggc ctg tcc ccc acc ctc	4320
Thr Arg Ala Lys His Leu Gln Leu Met Gly Gly Leu Ser Pro Thr Leu	
1425 1430 1435 1440	
tac tgg ctt ggc aac ttt ctc tgg gac atg tgt aac tac ttg gtg cca	4368
Tyr Trp Leu Gly Asn Phe Leu Trp Asp Met Cys Asn Tyr Leu Val Pro	
1445 1450 1455	

# FIG. 3H

gca tgc atc gtg gtg ctc atc ttt ctg gcc ttc cag cag agg gca tat	4416
Ala Cys Ile Val Val Leu Ile Phe Leu Ala Phe Gln Gln Arg Ala Tyr	
1460 1465 1470	
gtg gcc cct gcc aac ctg cct gct ctc ctg ctg ttg cta cta ctg tat	4464
Val Ala Pro Ala Asn Leu Pro Ala Leu Leu Leu Leu Leu Leu Tyr	
1475 1480 1485	
ggg aga cag gca gtt cca gtc acc cct gcg ctg gga ggt ggt cgg caa	4512
Gly Arg Gln Ala Val Pro Val Thr Pro Ala Leu Gly Gly Gly Arg Gln	
1490 1495 1500	
gaa cct ctt ggc cat ggt gat aca ggg gcc cct ctt cct tct ctt cac	4560
Glu Pro Leu Gly His Gly Asp Thr Gly Ala Pro Leu Pro Ser Leu His	
1505 1510 1515 1520	
act act gct gca gca ccg aag cca act cct gcc aca gcc cag ggt gag	4608
Thr Thr Ala Ala Ala Pro Lys Pro Thr Pro Ala Thr Ala Gln Gly Glu	
1525 1530 1535	
gtc tct gcc act cct ggg aga gga gga cga gga tgt agc ccg tga	4653
Val Ser Ala Thr Pro Gly Arg Gly Gly Arg Gly Cys Ser Pro	
1540 1545 1550	

FIG. 4A

	1		50
muABC1	.....	.....	.....
muABCR	MGFLRQIQLL	LWKNWTLRKR	QKIRFVVELV WPLSLFLVLI WLRNANPLYS
muABCL	MAFCTQLMLL	LWKNYTYRRR	QPIQLLVELL WPLFLFFILV AVRHSHPPLE
	51		100
muABC1	.....	MPSAGTLPWV	QGIICNANNP CRYPTOPTGEA PGVVGNFNKS
muABCR	QHECHFPNKA	MPSAGLLPWL	QGIFCNMNNP CFQNPPTGES PGTVSNYNNS
muABCL	HHECHFPNKP	LPSAGTVPWL	QGLVCNVNNS CFQHPTPGEK PGVLSNFKDS
	101		150
muABC1	IVSRLFSDAQ	RLLLYSQRDT	SIKDMHKVLR MLRQIKHPN. ....SN
muABCR	ILARVYRDFQ	ELFMDTPEVQ	HLGQVWAE LR TLSQFMDTLR THPERFAGRG
muABCL	LISRLADTR	TVLGGHSIQD	MLDALGKLIP VLRVGGGA. ....
	151		200
muABC1	LKLQDFLVDN	ETFSGFLQHN	LSLPRSTVDS LLQXNVGLQK VFLQGYQLHL
muABCR	LQIRDILKDE	EALTLFLMRN	IGLSDSVAHL LVNSQVRVEQ FAYGVPDLEL
muABCL	.....	.....	.....
	201		250
muABC1	ASLCNGSKLE	EIIQLG....	..DAEVSALC GLPRKKLDAA ERVLRYNMDI
muABCR	TDIACSEALL	QRFIIFSQRR	GAQTVRDALC PLSQVTLQWI EDTLYADVDF
muABCL	.....	.....	..RPQESDQP TSQGSVTKLL EKILQRASLD
	251		300
muABC1	LKPVVTKLNS	TSHLPTQH LA	EATTVLLDSL GGLAQELFST KSWSDMRQEV
muABCR	FKLFHVLPTL	LDSSSQGINL	RFWGGILSDL SPRMQKFIHR PSVQDLLWVS
muABCL	PVLGQAQDSM	RKFSDAIRDL	AQELLTLPSL MELRALLR.. R.....
	301		350
muABC1	MFLTNVNSSS	SSTQIYQAVS	RIVCGHPEGG GLKIKSLNWX EDNNYKALFG
muABCR	RPLLQNGGPE	TFTQLMSILS	DLLCGYPEGG GSRVFSFNWX EDNNYKAFLG
muABCL	.....PR	GSAGSLELVS	EALCSTKGPS SPGGLSLNWX EANQLNEFMG
	351		400
muABC1	GNNTEEDVDT	FYDNSTTPYC	NOLMKNLESS PLSRIIWKAL KPLLVGKILY
muABCR	IDSTRKDPAY	SYDKRTTFC	NSLIQSLESN PLTKIAWRAA KPLLMGKILF
muABCL	...PEVAPA	LPDNLSPAC	SEFVGTLDDH PVSRLLRRL KPLILGKILF
	401		450
muABC1	TPDTPATRQV	MAEVNKTQFE	LAVFHDLEGM WEELSPQIWT FMENSQEMDL
muABCR	TPDSPAARRI	MKNANSTFEE	LDRVRKLVKA WEEVGPQIWX FFEKSTQMTV
muABCL	APDTNFTRKL	MAQVNQTFEE	LALLRDLHEL WGVLGPPQIFN FMNDSTNVAM
	451		500
muABC1	VRTLLDSRGN	DQFWEQKLDG	LDWTAQDIMA FLAKNPEDVQ SPNGSVYTWR
muABCR	IRDTLQHPTV	KDFINRQLGE	EGITTEAVLN FFSNGPQEKQ ADDMTSFDWR
muABCL	LQRLLDVGGT	GQRQQT PRAQ	.....K.. KL.EAIKDFL DPSRGGYSWR

FIG. 4B

	501				550
muABC1	EAFNETNQAI	QTISRMECV	NLNKLEPIPT	EVRLINKSME	LLDERKFWAG
muABCR	DIFNITDRFL	RLANQYLECL	VLDKFESYDD	EVQLTQRALS	LLEENRFWAG
muABCL	EAHADMGRLA	GILGQMMECV	SLDKLEAVPS	EEALVSRAL	LLGERRLWAG
	551				600
muABC1	IVFTG.....	...ITPDSVE	LPHHVKYKIR	MDIDNVERTN	KIKDGYWDPG
muABCR	VVFPG.....	...MYPWASS	LPPHVKYKIR	MDIDVVEKTN	KIKDRYWDSG
muABCL	IVFLSPEHPL	DPSELSSPAL	SPGHLRFKIR	MDIDDVTRTN	KIRDKFWDPG
	601				650
muABC1	PRADPFEDMR	YVWGGFAYLQ	DVVEQAIIRV	LTGSEKKTGV	YVQQMPYPCY
muABCR	PRADPVEDFR	YIWGGFAYLQ	DMVEQGIVKS	QMQAEPPIGV	YLQQMPYPCF
muABCL	PSADPFMDLR	YVWGGFVYLQ	DLLEQAARV	LGGGNSRTGL	YLQQMPHPCY
	651				700
muABC1	VDDIFLRVMS	RSMPLFMTLA	WIYSVAVIK	SIVYEKEARL	KETMRIMGLD
muABCR	VDDSFMIILN	RCFPIFMVLA	WIYSVSMTVK	GIVLEKELRL	KETLKNQGS
muABCL	VDDVFLRVLS	RSLPLFLTAL	WIYSVALTVK	AVVREKETRL	RETMRAMGLS
	701				750
muABC1	NGILWFSWFV	SSLIPLLVSA	GLLVVILKLG	NLLPYSDPSV	VFVFLSVFAM
muABCR	NAVIWCTWFL	DSFSIMALSI	FLLTLFIMHG	RILHYSDPFI	LFLFLLAFAF
muABCL	RAVLWLGWFL	SCLGPFLVSA	ALLVLVLKLG	NILPYSHPVV	IFLFLAAFAV
	751				800
muABC1	VTILQCFLIS	TLFSRANLAA	ACGGIIYFTL	YLPYVLCVAW	QDYVGFSIKI
muABCR	ATIMQSFLLS	TLFSKASLAA	ACSGVIYFTL	YLPYVLCFAW	QDRMTADLKT
muABCL	ATVAQSFLLS	AFFSRANLAA	ACGGLAYFAL	YLPYVLCVAW	RERLHLGGLL
	801				850
muABC1	FASLLSPVAF	GFGCEYFALF	EEQGIGVQWD	NLFESPVEED	GFNLTTAVSM
muABCR	TVSLLSSVAF	GFGTEYLVR	EEQGLGLQWS	NIGKSPLEGD	EFSFLLSMKM
muABCL	AASLLSPVAF	GFGCESLALL	EEQGDGAQWH	NLGTG.PAED	VFSLAQVSAF
	851				900
muABC1	MLFDTFLYGV	MTWYIEAVFP	GQYGIPRPWY	FPCTKSYWFG	.....
muABCR	MLLDAALYGL	LAWYLDQVFP	GDYGTPLPWY	FLLQESYWL	GEGCSTREER
muABCL	LLLDVAVIYGL	ALWYLEAVCP	GQYGIPEPWN	FPFRRSYWCG	.....
	901				950
muABC1	.....EEIDE	KSHPGSSQKG	VSEICMEEEP	THLRLGVSIQ	NLVKVYRDGM
muABCR	ALEKTEPLTE	EMEDPEHPEG	MNDSFFEREL	PGLVPGVCVK	NLVKVFEPSP
muABCL	.....PGP.P	KSSVLAPAPQ	DPKVLVEEPP	LGLVPGVSIR	GLKKHFRGCP
	951				1000
muABC1	KVAVDGLALN	FYEGQITSFL	GHNGAGKTTT	MSILTGLFPP	TSGTAYILGK
muABCR	RPAVDRLNIT	FYENQITAF	GHNGAGKTTT	LSILTGLLPP	TSGTVLIGGK
muABCL	QPALQGLNLD	FYEGHITAF	GHNGAGKTTT	LSILSGLFPP	SSGSASILGH



FIG. 4C

	1001				1050
muABC1	DIRSEMSSIR	QNLGVCPQHN	VLFDMLTVEE	HIWFYARLKG	LSEKHVKAEM
muABCR	DIETNLDVVR	QSLGMCPQHN	ILFHHLTVAE	HILFYAQLKG	RSWEEAQLEM
muABCL	DVQTNMAAIR	PHLGICPQYN	VLFDMLTVEE	HVWFYGRLLKG	VSAAAMGPER
	1051				1100
muABC1	EQMALDVGLP	PSKLKSKTSQ	LSGGMQRKLS	VALAFVGGSK	VVILDEPTAG
muABCR	EAMLEDTGHL	HK.RNEEAQD	LSGGMQRKLS	VAIAFVGDSK	VVVLDEPTSG
muABCL	ERLIRDVGLT	LK.RDTQTRH	LSGGMQRKLS	VAIAFVGGSR	VVIMDEPTAG
	1101				1150
muABC1	VDPYSRRGIW	ELLLKYRQGR	TIILSTHMD	EADILGDRIA	IISHGKLCV
muABCR	VDPYSRRSIW	DLLLKYRSGR	TIIMSTHMD	EADLLGDRIA	IISQGRLYCS
muABCL	VDPASRRGIW	ELLLKYREGR	TLILSTHMD	EAELLGDRVA	MVAGGSLCCC
	1151				1200
muABC1	GSSLFLKNQL	GTGYLTLVK	KDVESLSSC	RNSSSTVSCL	KKEDSVSQSS
muABCR	GTPLFLKNCF	GTGFYTLVR	KMKNIQSQRG	.GCEGVCSC	SKGFSTR...
muABCL	GSPLFLRRHL	GCGYLTLVK	SSQSLVTHDA	KGDSEDPRE	KKSDGNRTS
	1201				1250
muABC1	.....S	DAGLSDHES	DTLTIDVSAI	SNLIRKHVSE	ARLVEDIGHE
muABCR	.....C	PTRVDEITEE	QVLDGDVQEL	MDLVYHHVPE	AKLVEICIGQE
muABCL	DTAFTRGTSD	KSNQAPAPGA	VPITPSTARI	LELVQQHVPG	AQLVEDLPHE
	1251				1300
muABC1	LTYVLPYEA	KEGAFVELFH	EIDRLSDLG	ISSYGISETT	LEEIFLKVAE
muABCR	LIFLLPNKNF	KQRAYASLFR	ELEETLADLG	LSSFGISDTP	LEEIFLKVTE
muABCL	LLLVLPHYAG	LDGSFAMVFQ	ELDQQLLELL	LTGYGISDTN	LEEIFLKVVE
	1301				1350
muABC1	ESGVDAETSD	GTLPARNRNR	AFGDKQSCLH	PFTEDDAVDP	NDSIDDPESR
muABCR	DAGAGSMFVG	GAQQKREQAG	LRHPCSAPE	KLRQYAQAPH	TCSPGQVDP
muABCL	DA...HREGG	DSRPQLHLR.	.TCTPQPPTG	PEASVLENGE	LAK...LV..L
	1351				1400
muABC1	ETDLLSGMDG	KGSYQLKGWK	LTQQQFVALL	WKRLLIARRS	RKGFFAQIVL
muABCR	KGQPSPEPED	PGVPFNTGAR	LILQHVQALL	VKRFHHTIRS	RKDFVAQIVL
muABCL	D.PQAPQGLA	PNAAQVQGW	LTCQQLRALL	HKRFLARRS	RRGLFAQVVL
	1401				1450
muABC1	PAVFVCIALV	FSLIVPPFGK	YPSLELQPWM	YNEQYTFVSN	DAPEDMGTE
muABCR	PATFVFLALM	LSIIVPPFGE	FPALTLPWM	YGHQYTFFSM	DEPNNEHLEV
muABCL	PALFVGLALF	FSLIVPPFGQ	YPPLQLSPAM	YGPQVSFFSE	DAPGDPNRMK
	1451				1500
muABC1	LLNALTKDPG	FGTRCMGNP	IPDTPCLAG.	EEDWTISPVP	QSIVDLFQNG
muABCR	LADVLLNRPG	FGNRCLKBEW	LPEYPCIN..	ATSWKTPSVS	PNITHLFQKQ
muABCL	LLEALLGEAG	LQEPSMQDKD	ARGSECTHSL	ACYFTVPEVP	PDVASILASG

FIG. 4D

	1501				1550
muABC1	NWTMKNPSPA	CQCSSDKIKK	MLPVCPPGAG	GLPPPQRKQK	TADILQNLTG
muABCR	KWTAAHPSPS	CKCSTREKLT	MLPECPEGAG	GLPPPQRTQR	STEVLQDLTN
muABCL	NWTPESPSPA	CQCSQPGARR	LLPDCPAGAG	GPPPPQAVAG	LGEVVQNLTG
	1551				1600
muABC1	RNISDYL VKT	YVQIIAKSLK	NKIWVNEFRY	GGFSLGVSNS	QALPPSHEVN
muABCR	RNISDYL VKT	YPALIRSSLK	SKFWVNEQRY	GGISIGGKLP	AIPISGEALV
muABCL	RNVSDFL VKT	YPSLVRRGLK	TKKWVDEVRY	GGFSLGGRDP	.DLPTGHEVV
	1601				1650
muABC1	DAIKQMKKLL	KLTKDTSADR	FLSSLGRFMA	GLDTKNNVKV	WFNNKGWHAI
muABCR	GFLSGLGQMM	NVSGGPVTRE	ASKEMLDFLK	HLETTDN IKV	WFNNKGWHAL
muABCL	RTLAEIRALL	SPQPGNALDR	ILNNLTQWAL	GLDARNSLKI	WFNNKGWHAM
	1651				1700
muABC1	SSFLNVINNA	ILRANLQKGE	NPSQYGITAF	NHPLNLT KQQ	LSEVALMTTS
muABCR	VSFLNVAHNA	ILRASLPRDR	DPEEYGITVI	SQPLNLTKEQ	LSDITVL TTS
muABCL	VAFVNRRANG	LLHALLPSGP	VRHAHSITTL	NHPLNLTKEQ	LSEATLIASS
	1701				1750
muABC1	VDVLVSICVI	FAMSFVPASF	VVFLIQERVS	KAKHLQFISG	VKPV IYWLSN
muABCR	VDAVVAICVI	FAMSFVPASF	VLYLIQERT	KAKHLQFISG	VSPTTYWLTN
muABCL	VDVLVSICVV	FAMSFVPASF	TLVLIEERIT	RAKHLQLVSG	LPQTLYW LGN
	1751				1800
muABC1	FVWDMCNYVV	PATLVIIIFI	CFQQKSYVSS	TNLPVLALLL	LLYGWSITPL
muABCR	FLWDMNYAV	SAGLVVGIFI	GFQKKAYTSP	DNLPALVSLL	MLYGWAVIPM
muABCL	FLWDMCNYLV	AVCIVVFIFL	AFQQRAYVAP	ENLPALLLLL	LLYGWSITPL
	1801				1850
muABC1	MYPASFVFKI	PSTAYVVLTS	VNLFIGINGS	VATFVLELFT	NN.KLNDIND
muABCR	MYPASFLFEV	PSTAYVALSC	ANLFIGINSS	AITFVLELFE	NNRTLLRFNA
muABCL	MYPASFFFSV	PSTAYVVLTC	INLFIGINSS	MATFVLELLS	DQ.NLQEVSR
	1851				1900
muABC1	ILKSVFLIFP	HFCLGRGLID	MVKNQAMADA	LERFGENRFV	SPLSWDLVGR
muABCR	MLRKLLIVFP	HFCLGRGLID	LALSQAVTDV	YAQFGEEYSA	NPFQWDLIGK
muABCL	ILKQVFLIFP	HFCLGRGLID	MVRNQAMADA	FERLGDKQFQ	SPLRWDI IGK
	1901				1950
muABC1	NLFAMAVEGV	VFFLITVLIQ	YRFFIRPRPV	KAKLPPLNDE	DEDVRRERQR
muABCR	NLVAMAIEGV	VYFLLTLLIQ	HHFFLTRWIA	EPAREPVFDE	DDDVAERQR
muABCL	NLLAMMAQGP	LFLLLITLLQ	HRNRLLPQSK	PRLLPPLGEE	DEDVAQERER
	1951				2000
muABC1	ILDGGGQNDI	LEIKELTKIY	RRKRKPAVDR	ICIGIPPGEK	FGLLG VNGAG
muABCR	VMSGGNKTDI	LKLNELTKVY	SGSSSPA VDR	LCVGVRPGEK	FGLLG VNGAG
muABCL	VTKGATQG DV	LVLRLDTKVY	RGQRNPAVDR	LCLGIPPGEK	FGLLG VNGAG

FIG. 4E

	2001				2050
muABC1	KSTTFKMLTG	DTPVTRGDAF	LNKNSILSNI	HEVHQNMGYC	PQFDAITELL
muABCR	KTTTFKMLTG	DTTVTSGDAT	VAGKSILTSI	SDVHQNMGYC	PQFDAIDDLL
muABCL	KTSTFRMVTG	DTLPSSGEAV	LAGHNVAQER	SAAHRSMGYC	PQSDAIFDLL
	2051				2100
muABC1	TGREHVEFFA	LLRGVPEKEV	GKFGEWAIK	LGLVKYGEKY	ASNYSGGNKR
muABCR	TGREHLYLYA	RLRGVPSKEI	EKVANWGIQS	LGLSLYADRL	AGTYSGGNKR
muABCL	TGREHLELFA	RLRGVPEAQV	AQTALSGLVR	LGLPSYADRP	AGTYSGGNKR
	2101				2150
muABC1	KLSTAMALIG	GPPVVFLDEP	TTGMDPKARR	FLWNCALSIV	KEGRSVVLTS
muABCR	KLSTAIALTG	CPPLLLLDEP	TTGMDPQARR	MLWNTIVSII	REGRAVVLTS
muABCL	KLATALALVG	DPAVVFLDEP	TTGMDPSARR	FLWNSLLSVV	REGRSVVLTS
	2151				2200
muABC1	HSMEECEALC	TRMAIMVNGR	FRCLGSVQHL	KNRFGDGYTI	VVRIAGS...
muABCR	HSMEECEALC	TRLAIMVKGT	FQCLGTIQHL	KYKFGDGYIV	TMKIKSPKDD
muABCL	HSMEECEALC	TRLAIMVNGR	FRCLGSSQHL	KGRFGAGHTL	TLRVPPD...
	2201				2250
muABC1	.NPDLKPVQE	FFGLAFPGSV	LKEKHRNMLQ	YQLPSS.LSS	LARIFSILSQ
muABCR	LLPDLNPVEQ	FFQGNFPGSV	QRERHHSMLQ	FQVPS...SS	LARIFQLLIS
muABCL	.Q..PEPAIA	FIRITFPGAE	LREVHGSRLR	FQLPPGGRCT	LTRVFRELAA
	2251				2300
muABC1	SKKRLHIEDY	SVSQTTLQDV	FVNFAKDQSD	DDHLKDLSLH	KNQTVVDVAV
muABCR	HKDSLLEIEY	SVTQTTLQDV	FVNFAKQOTE	TYDLPLHPRA	AGASWQAKLE
muABCL	QGRAHGVEDF	SVSQTTLQEV	FLYFSKDQGE	EEESSRQAE	EEEVSKPGRQ
	2301				2337
muABC1	LTSFLQDEKV	KESYV.....	.....	.....	
muABCR	EKSGRLQTQE	PLPAGSEQLA	NGSNPTAAED	KHTRSPQ	
muABCL	HPKRVSRLFLE	DPSSVETMI.	.....	.....	

FIG. 5A

	1				50
huABC1	MACWPQLRLL	LWKNLTFRRR	QTCQLLLEVA	WPLFIFLILI	SVRLSYPPYE
huABCR	MGFVRQIQLL	LWKNWTLRKR	QKIRFVVELV	WPLSLFLVLI	WLRNANPLYL
huABCL	MAFWTQLMLL	LWKNFMYRRR	QPVQLLVELL	WPLFLFFILV	AVRHSHPPLE
	51				100
huABC1	QHECHFPNKA	MPSAGTLPWV	QGIICNANNP	CFRYPTPGEA	PGVVGNFNKS
huABCR	HHECHFPNKA	MPSAGMLPWL	QGIFCNVNNP	CFQSPTPGES	PGIVSNYNNS
huABCL	HHECHFPNKP	LPSAGTVPWL	QGLICNVNNT	CFPQLTPGEE	PGRLSNFNDS
	101				150
huABC1	IVARLFSDAR	RLLLYSQKDT	SMKDMRKVLR	TLQQIKKSS.	.....SN
huABCR	ILARVYRDFQ	ELLMNAPESQ	HLGRIWTELH	ILSQFMDTLR	THPERIAGRQ
huABCL	LVSRLLDAR	TVLGGASAGR	TLAGLGKLI	TLRAARSTA.	.....
	151				200
huABC1	LKLQDFLVDN	ETFSGFLYHN	LSLPKSTVVK	MLRADVILHK	VFLQGYQLHL
huABCR	IRIRDILKDE	ETLTFLIKN	IGLSDSVVYL	LINSQVRPEQ	FAHGVPLDAL
huABCL	.....	.....	.....	.....	.....
	201				250
huABC1	TSLCNGSKSE	EMIQLG....	..DQEVSELC	GLPREKLAAA	ERVLRSNMDI
huABCR	KDIACSEALL	ERFIIFSQR	GAKTVRYALC	SLSQGTQWI	EDTLNANVDF
huABCL	.....	.....	.....	QPQPTKQSPL	EPPMLDVAEL
	251				300
huABC1	LKPILRTLNS	TSPFPSKELA	EATKTLLHSL	GTLAQELFSM	RSWSDMRQEV
huABCR	FKLFRVLP	LDSSRQGINL	RSWGGILSDM	SPRIQEFIHR	PSMQDLLWVT
huABCL	LTSLRLTESL	GLALQA..Q	EPLHSLLEAA	EDLAQELLAL	RSLVELRALL
	301				350
huABC1	MFLTNVNSSS	SSTQIYQAVS	RIVCGHPEGG	GLKIKSLNWX	EDNNYKALFG
huABCR	RPLMQNGGPE	TFTKLMGILS	DLGCGYPEGG	GSRVLSFNWY	EDNNYKALFG
huABCL	QRPRGTSQP.	.....LELLS	EALCSVRGPS	STVGPSLNWY	EASDLMELVG
	351				400
huABC1	GNGTEEDAET	FYDNSTTPYC	NDLMKNLESS	PLSRIIWKAL	KPLLVGKILY
huABCR	IDSTRKDPIY	SYDRRTTSFC	NALIQSLESN	PLTKIAWRAA	KPLLMGKILY
huABCL	....QEPESA	LPDSSLSPAC	SELIGALDSH	PLSRLLWRR	KPLILGKLLF
	401				450
huABC1	TPDTPATRQV	MAEVNKTQF	LAVFHDLEGM	WEELSPKIWT	FMENSQEMDL
huABCR	TPDSPAARRI	LKNANSTFEE	LEHVRKLVKA	WEEVGPQIWX	FFDNSTQNMN
huABCL	APDTPFTRKL	MAQVNRTFEE	LTLLRDVREV	WEMLGPRIFT	FMNDSSNVAM
	451				500
huABC1	VRMLLDSDRN	DHFWEQQLDG	LDWTAQDIVA	FLAKHPEDVQ	SSNGSVYTWR
huABCR	IRDTLGNPTV	KDFLNRQLGE	EGITAEAILN	FLYKGPRESQ	ADDMANFDWR
huABCL	LQRLQLMQDE	GRRQPRPGGR	D.....	.HMEALRSFL	DPGSGGYSWQ

FIG. 5B

	501		550
huABC1	EAFNETNQAI	RTISRFMECV	NLNKLEPIAT EVWLINKSME LLDERKFWAG
huABCR	DIFNITDRTL	RLVNQYLECL	VLDKFESYND ETQLTQRALS LLEENMFWAG
huABCL	DAHADVGHV	GTLGRVTECL	SLDKLEAAPS EAALVSRALQ LLAEHRFWAG
	551		600
huABC1	IVFTG.....	...ITPGSIE	LPHHVKYKIR MDIDNVERTN KIKDGYWDPG
huABCR	VVFPD.....	...MYPWTSS	LPPHVKYKIR MDIDVVEKTN KIKDRYWDSG
huABCL	VVFLGPEDES	DPTEHPTPDL	GPGHVRIKIR MDIDVVTRTN KIRDRFWDPG
	601		650
huABC1	PRADPFEDMR	YVWGGFAYLQ	DVVEQAIIRV LTGTEKKTGV YMQQMPYPYCY
huABCR	PRADPVEDFR	YIWGGFAYLQ	DMVEQGITRS QVQAEAPVGI YLQQMPYPYCF
huABCL	PAADPLTDLR	YVWGGFVYLQ	DLVERAAVRV LSGANPRAGL YLQQMPYPYCY
	651		700
huABC1	VDDIFLRVMS	RSMPLFMTLA	WIYSVAVIK GIVYEKEARL KETMRIMGLD
huABCR	VDDSFMIILN	RCFPIMFVLA	WIYSVSMTVK SIVLEKELRL KETLKNQGV
huABCL	VDDVFLRVLS	RSLPLFLTTL	WIYSVTLTVK AVVREKETRL RDTMRAMGLS
	701		750
huABC1	NSILWFSWFI	SSLIPLLVS	ALLVVLVCLG NLLPYSDPSV VFVFLSVFAV
huABCR	NAVIWCTWFL	DSFSIMSM	SI FLLTIFIMHG RILHYSDPFI LFLFLLAFST
huABCL	RAVLWLGWFL	SCLGPFLLS	ALLVVLVCLG DILPYSHPGV VFLFLAAFAV
	751		800
huABC1	VTILQCFLIS	TLFSRANLAA	ACGGIIYFTL YLPYVLCVAW QDYVGFTLKI
huABCR	ATIMLCFLLS	TFFSKASLAA	ACSGVIYFTL YLPHILCFAW QDRMTAELKK
huABCL	ATVTQSFLLS	AFFSRANLAA	ACGGLAYFSL YLPYVLCVAW RDRLPAGGRV
	801		850
huABC1	FASLLSPVAF	GFGCEYFALF	EEQGIGVQWD NLFESPVEED GFNLTTSVSM
huABCR	AVSLLSPVAF	GFGTEYLVRF	EEQGLGLQWS NIGNSPTEGD EFSFLLSMQM
huABCL	AASLLSPVAF	GFGCESLALL	EEQGEQAQWH NVG.TRPTAD VFSLAQVSGL
	851		900
huABC1	MLFDTFLYGV	MTWYIEAVFP	GQYGIPRPWY FPCTKSYWFG .....
huABCR	MLLDAAVYGL	LAWYLDQVFP	GDYGTPLPWY FLLQESYWLS GEGCSTREER
huABCL	LLLDAAVYGL	ATWYLEAVCP	GQYGIPEPWN FPFRRSYWCG .....
	901		950
huABC1	.....EESDE	KSHPGSNQKR	ISEICMEEEP THLKLGVSIQ NLVKVYRDGM
huABCR	ALEKTEPLTE	ETEDPEHPEG	IHDSFFEREH PGWVPGVCVK NLVKIFEP
huABCL	.....PRPP	KSPAPCPTPL	DPKVLVEEAP PGLSPGVSVR SLEKRFP
	951		1000
huABC1	KVAVDGLALN	FYEGQITSFL	GHNGAGKTTT MSILTGLFPP TSGTAYILGK
huABCR	RPAVDRLNIT	FYENQITAF	LGHNGAGKTTT LSILTGLLPP TSGTVLVGGR
huABCL	QPALRGLSLD	FYQGHITAF	LGHNGAGKTTT LSILSGLFPP SGGSAFILGH

FIG. 5C

	1001				1050
huABC1	DIRSEMSTIR	QNLGVCPQHN	VLFDMLTVEE	HIWFYARLKG	LSEKHVKAEM
huABCR	DIETSLDAVR	QSLGMCPQHN	ILFHHLTVAE	HMLFYAQLKG	KSQEAAQLEM
huABCL	DVRSSMAAIR	PHLGVCPQYN	VLFDMLTVDE	HVWFYGRLLKG	LSAAVVGPEQ
	1051				1100
huABC1	EQMALDVGLP	SSKLKSKTSQ	LSGGMQRKLS	VALAFVGGSK	VVILDEPTAG
huABCR	EAMLEDTGLH	HK.RNEEAQD	LSGGMQRKLS	VAIAFVGDAK	VVILDEPTSG
huABCL	DRLLQDVGLV	SK.QSVQTRH	LSGGMQRKLS	VAIAFVGGSQ	VVILDEPTAG
	1101				1150
huABC1	VDPYRRGIW	ELLLKYRQGR	TIILSTHHMD	EADVLGDRIA	IISHGKLCV
huABCR	VDPYRRSIW	DLLLKYRSGR	TIIMSTHHMD	EADLLGDRIA	IIAQGRLYCS
huABCL	VDPASRRGIW	ELLLKYREGR	TLILSTHHLD	EAELLGDRVA	VVAGGRLLCC
	1151				1200
huABC1	GSSLFLKNQL	GTGYLTLVK	KDVESLSSC	RNSSSTVSYL	KKEDSVSQSS
huABCR	GTPLFLKNCF	GTGLYTLVR	KMKNIQSQRK	...GSEGT	SCSSKGFSTT
huABCL	GSPLFLRRHL	GSGYTLVK	ARLPLTTNEK	.....	..ADTDMEGS
	1201				1250
huABC1	SDAGLGSDE	SDTLTIDVSA	ISNLIRKHVS	EARLVEDIGH	ELTYVLPYEA
huABCR	CPAHVDDLTP	EQVLDGDVNE	LMDVVLHHVP	EAKLVECIGQ	ELIFLLPNKN
huABCL	VDTRQEKNG	SQGSRVGTPQ	LLALVQHWVP	GARLVEELPH	ELVLVLPYTG
	1251				1300
huABC1	AKEGAFVELF	HEIDRLSDL	GISSYGISET	TLEEIFLKVA	EESGVDAETS
huABCR	FKHRAYASLF	RELEETLADL	GLSSFGISDT	PLEEIFLKVT	EDSDSGPLFA
huABCL	AHDGSFATLF	RELDTRLAEL	RLTGYGISDT	SLEEIFLKVV	EECAADTME
	1301				1350
huABC1	DGTLPARNR	RAFGDKQSCL	RPFTEDDAAD	PNDSDIDPES	RETDLLSGMD
huABCR	GGAQQKREN	..VNPRHPCL	GPREKAGQTP	QDSNVCPGA	PAAHPEGQPP
huABCL	DGSCGQHLCT	.GIAGLDVTL	RLKMPPQETA	LENDEPAGSA	PETDQSGSPD
	1351				1400
huABC1	GK...GSYQ	VKGWKLTOQQ	FVALLWKRL	IARRSRKGFF	AQIVLPAVFF
huABCR	PEPECPPQL	NTGTQLVLQH	VQALLVKRFQ	HTIRSHKDFL	AQIVLPATFV
huABCL	AV...G..R	VQGWALTRQQ	LQALLLKRFL	LARRSRGLF	AQIVLPALFV
	1401				1450
huABC1	CIALVFSILV	PPFGKYPSLE	LQPMWYNEQY	TFVSNDAPE	TGTLELLNAL
huABCR	FLALMLSIVI	LPFGEYPALT	LHPWIYGQY	TFFSMDEPGS	EQFTVLADVL
huABCL	GLALVFSILV	PPFGHYPALR	LSPTMYGAQV	SFFSEDAPGD	PGRARLLEAL
	1451				1500
huABC1	TKDPGFGTRC	MEGNPIPDTP	CQAGEEEWTT	APVPQTIMDL	FQNGNWTMQN
huABCR	LNKPGFGNRC	LKEGWLPEYP	CGN.STPWKT	PSVSPNITQL	FQKQKWTQVN
huABCL	L.....	.QEAGLEEPP	VQHSSHRFSA	PEVPAEVAKV	LASGNWTPES

FIG. 5D

	1501				1550
huABC1	PSPACQCSSD	KIKKMLPVCP	PGAGGLPPPQ	RKQNTADILQ	DLTGRNISDY
huABCR	PSPSCRCSTR	EKLTMLEPCP	EGAGGLPPPQ	RTQRSTEILQ	DLTDRNISDF
huABCL	PSPACQCSQP	GARRLLPDCP	AAAGGPPPPQ	AVTGSGEVVQ	NLTGRNLSDF
	1551				1600
huABC1	LVKTYVQIIA	KSLKNKIWVN	EFRYGGFSLG	VSNTQALPPS	QEVNDATKQM
huABCR	LVKTYPALIR	SSLKSKFWVN	EQRYGGISIG	GKLPVVPITG	EALVGFLSDL
huABCL	LVKTYPRLVR	QGLKTKKWVN	EVRYGGFSLG	GRDPGLP.SG	QELGRSVEEL
	1601				1650
huABC1	KKHLKLAKDS	SADRFLNSLG	RFMTGLDTRN	NVKVWFNNKG	WHAISSFLNV
huABCR	GRIMNVSGGP	ITREASKEIP	DFLKHLETED	NIKVWFNNKG	WHALVSFLNV
huABCL	WALLSPLPGG	ALDRVLKNLT	AWAHS LDAQD	SLKIWFNNKG	WHSMVAFVNR
	1651				1700
huABC1	INNAILRANL	QKGENPSHYG	ITAFNHPLNL	TKQQLSEVAP	MTTSVDVLVS
huABCR	AHNAILRASL	PKDRSPEEYG	ITVISQPLNL	TKEQLSEITV	LTTSDAVVA
huABCL	ASNAILRAHL	PPGPARHAHS	ITTLNHPLNL	TKEQLSEAL	MASSVDVLVS
	1701				1750
huABC1	ICVIFAMSFV	PASFVVFLIQ	ERVSKAKHLQ	FISGVKPVYI	WLSNFWDMC
huABCR	ICVIFSMSFV	PASFVLYLIQ	ERVNKS KHLQ	FISGVSPPTY	WVTNFWLWIM
huABCL	ICVVFAMSFV	PASFTLV LIE	ERVTRAKHLQ	LMGGLSPTLY	WLG NFWLWDMC
	1751				1800
huABC1	NYVVPATLVI	IIFICFQOKS	YVSSTNLPVL	ALLLLLYGWS	ITPLMYPASF
huABCR	NYSVSAGLVV	GIFIGFQKKA	YTSPENLPAL	VALLLLYGWA	VIPMMYPASF
huABCL	NYLVPACIVV	LIFLAFQORA	YVAPANLPAL	LLLLLLYGWS	ITPLMYPASF
	1801				1850
huABC1	VFKIPSTAYV	VLTSVNLFIG	INGSVATFVL	ELFTDN.KLN	NINDILKSVF
huABCR	LFDVPSTAYV	ALSCANLFIG	INSSAITFIL	ELFDNNRTLL	RFAVLRKLL
huABCL	FFSVPSTAYV	VLTCINLFIG	INGSMATFVL	ELFSDQ.KLQ	EVSRIKQVF
	1851				1900
huABC1	LIFPHFCLGR	GLIDMVKNQA	MADALERFGE	NRFVSPLSWD	LVGRNLFAMA
huABCR	IVFPHFCLGR	GLIDLALSQA	VTDVYARFGE	EHSANPFHWD	LIGKNLFAMV
huABCL	LIFPHFCLGR	GLIDMVRNQA	MADAFERLGD	RQFQSPLRWE	VVGKNLLAMV
	1901				1950
huABC1	VEGVVFFLIT	VLIQYRFFIR	PRPVNAKLSP	LNDEDEDVRR	ERQRILDGGG
huABCR	VEGVVYFLLT	LLVQRHFFLS	QWIAEPTKEP	IVDEDDDAE	ERQRIITGGN
huABCL	IQGPLFLLFT	LLLQHRSQLL	PQPRVRS LPL	LGEED EDVAR	ERERVVQGAT
	1951				2000
huABC1	QNDILEIKEL	TKIYRRKRKP	AVDRICVGIP	PGEFCG LLGV	NGAGKSSTFK
huABCR	KTDILRLHEL	TKIYLGTS SP	AVDRLCVGVR	PGEFCG LLGV	NGAGKTTTFK
huABCL	QGDVLVLRNL	TKVYRGQRMP	AVDRLC LGIP	PGEFCG LLGV	NGAGKTSTFR

FIG. 5E

	2001				2050
huABC1	MLTGDTTVTR	GDAFLNRNSI	LSNIHEVHQN	MGYCPQFDAI	TELLTGREHV
huABCR	MLTGDTTVTS	GDATEVAGKSI	LTNISEVHQN	MGYCPQFDAI	DELLTGREHL
huABCL	MVTGDTLASR	GEAVLAGHSV	AREPSAAHLS	MGYCPQSDAI	FELLTGREHL
	2051				2100
huABC1	EFFALLRGVP	EKEVGKVGEW	AIRKLGLVKY	GEKYAGNYSG	GNKRKLSTAM
huABCR	YLYARLRGVP	AEIEKVANW	SIKSLGLTVY	ADCLAGTYSG	GNKRKLSTAI
huABCL	ELLARLRGVP	EAQVAQTAGS	GLARLGLSWY	ADRPAGTYSG	GNKRKLATAL
	2101				2150
huABC1	ALIGGPPVVF	LDEPTTGMDP	KARRFLWNCA	LSVVKEGRSV	VLTSHSMEEC
huABCR	ALIGCPPLVL	LDEPTTGMDP	QARRMLWNVI	VSIIREGRAV	VLTSHSMEEC
huABCL	ALVGDPVAVF	LDEPTTGMDP	SARRFLWNSL	LAVVREGRSV	MLTSHSMEEC
	2151				2200
huABC1	EALCTRMAIM	VNGRFRCLGS	VQHLKNRFGD	GYTIVVRIAG	S...NPDLK
huABCR	EALCTRLAIM	VKGAFRCMGT	IQHLKSKFGD	GYIVTMKIKS	PKDDLPLDLN
huABCL	EALCSRLAIM	VNGRFRCLGS	PQHLKGRFAA	GHTLTLRVPA	A.....RSQ
	2201				2250
huABC1	PVQDFFGLAF	PGSVPKEKHR	NMLQYQLPSS	.LSSLARIFS	ILSQSKKRLH
huABCR	PVEQFFQGNF	PGSVQRERHY	NMLQFQVSS.	..SSLARIFQ	LLLSHKDSLL
huABCL	PAAAFVAAEF	PGSELREAHG	GRLRFQLPPG	GRCALARVFG	ELAVHGAEHG
	2251				2300
huABC1	IEDYSVSQTT	LDQVFVNFAK	DQSDDHLKD	LSLHKNQTVV	DVAVLTSFLQ
huABCR	IEEYSVTQTT	LDQVFVNFAK	QQTESHDLPL	HPRAAGASRQ	AQD.....
huABCL	VEDFSVSQTM	LEEVFLYFSK	DQKDEDETEE	QKEAGVGVDP	APGLQHPKRV
	2301				
huABC1	DEKVKESYV.	....			
huABCR	.....	....			
huABCL	SQFLDDPSTA	ETVL			